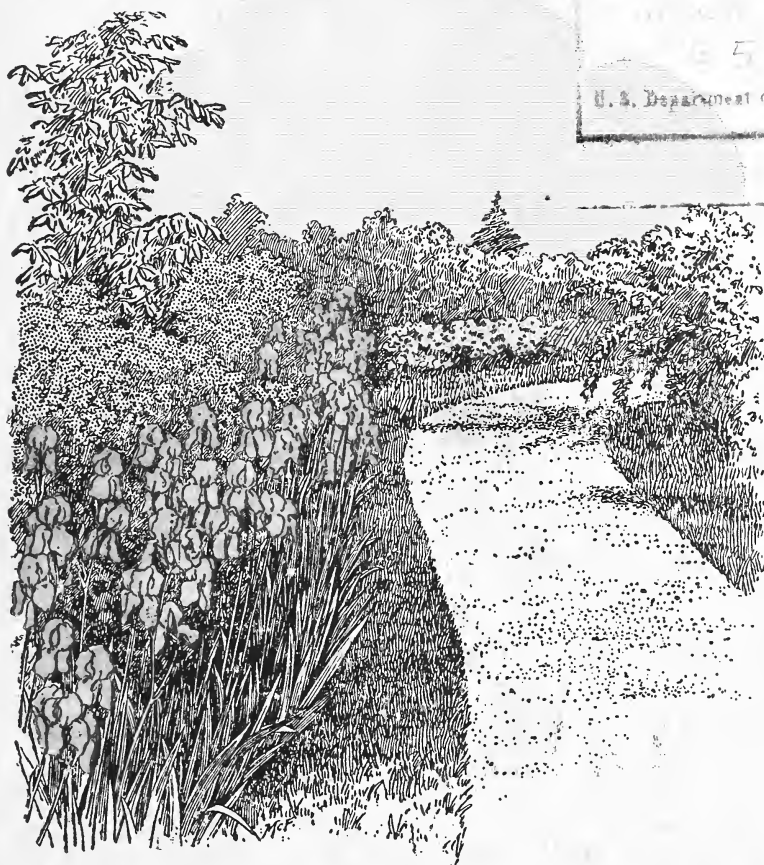


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

273 1919

Hardy Perennials And How to Grow Them



U. S. Department of Agriculture

PUBLISHED BY

HENRY F. MICHELL CO.

518 Market Street
PHILADELPHIA, PA.

GREENHOUSES AND NURSERIES, ANDALUSIA, PA.

INVITATION

ALL customers and others interested in horticulture are cordially invited to visit our plant establishment at Andalusia Station (New York Division of the Pennsylvania Railroad), about 16 miles from Philadelphia. In the spring, summer and autumn we invariably have interesting displays of hardy flowers, etc. This invitation applies to our city establishment as well, at 518 Market Street, Philadelphia. Persons desiring to visit our nurseries from Philadelphia can take any of the following routes:

Train, Broad Street Station, Pennsylvania Railroad, time 45 minutes; trolley, Fifth Street line, via Frankford, direct to the grounds, time 90 minutes; automobile, Broad Street to York Road, to Oak Lane, east to Cheltenham, over Cottman Street, to Frankford Avenue, turn to left and continue to Andalusia. Our grounds are located at Bristol Pike and Andalusia Avenue. Automobile running time 55 minutes.

HARDY PERENNIALS

And How to Grow Them

THIRD EDITION



SPECIAL NOTE

It may be unnecessary to state that all plants and roots described in this publication are grown by us in large quantities, and those who are interested are respectfully referred to our latest catalogues, copies of which can be had on request.

PUBLISHED BY

HENRY F. MICHELL CO.

518 MARKET STREET
PHILADELPHIA, PA.

Specialists in Garden, Flower, Grass and Field Seeds
and Hardy Perennial Plants

3000-6-19

Copyright, 1919, by Henry F. Michell Co.



Results like this can be obtained by planting our Hardy Perennials

© CIA 528584

JUL -3 1919



Planting of Foxgloves

PREFACE



THE writing of this little volume has been undertaken in consequence of appeals to us by numerous gardening friends who, from time to time, have requested some information on the growing of Hardy Perennials.

In his professional capacity, our nursery superintendent, who has made the subject his special study, has in the following pages attempted, in as few and simple words as possible, to explain the many little, but nevertheless important, cultural details which must be attended to by anyone desirous of success in herbaceous gardening. Success is indeed only to be achieved by strict attention to detail which, taken wholly, includes all that is understood by skilful culture.

In so small a book as this he does not, for a moment, pretend to have given a full description or a complete list of the many suitable plants for the hardy border, nor has he attempted to lay down any hard and fast rules for their formation, considering it more advantageous to leave this to individual tastes and requirements. The advice tendered and the various suggestions are based on his own experience, and only mention the principal cultural needs of the plants treated, which, if intelligently carried out, will insure a full measure of success.

A GARDEN ABLAZE

No matter what the existing differences of opinion may be as to the merits and beauty of the formal and architectural styles of gardening, there is, in the hardy perennial border, something which appeals to all. It may be in the constant change and variety of succession which such a border affords, but certain it is that more and more it is recognized that the hardy perennial border is an attractive adjunct to every well-ordered garden.

Redolent with bright-hued masses of rich color from early spring, when the golden yellow flowers of *Adonis Amurensis* greet us, to autumn (and in a mild season often well into December), when the Japanese Anemones, Tritomas, Asters and Hardy Chrysanthemums defy an ordinary frost, and provide us with a wealth of color that is refreshing during the dull, short days of the year. What, for instance, can do more to nurture the innate love of the beautiful in Nature than to watch these plants in their seasons? As each flower blooms and fades, another new beauty develops to take its place. Later, when the fresh green of new foliage is on the trees; still later, when the sun seems to parch the dry land, and then when the leaves are falling, telling us of Nature's rest once more, each day, each week, each month gives its tribute to the blaze of beauty which the hardy perennial border provides.

SITUATION OF BORDER

In choosing a location for a herbaceous border, a position which is at once well drained and airy will be found the most suitable. If the border is backed by a hedge, care must be taken that the roots of the plants that form the hedge are consistently kept in check to prevent their robbing the perennials of moisture and absorbing the manurial properties intended for the growing plants. A trellis covered with an assortment of hardy climbing plants, such as Roses, Clematis, etc., makes a most effective background, while certain of the dwarfed-growing deciduous flowering shrubs can be used for this purpose to distinct advantage, provided the border be wide enough.

SOIL AND ITS PREPARATION

In a great many nurserymen's catalogues and in many magazine articles we find the prospective planter advised that almost any garden soil is good enough for the requirements of these plants; but, while granting that a fair degree of success can, for a time, be obtained from any fairly good garden soil unaided by a dressing of manure, it will be found to well repay the extra expense if a liberal dressing of well-decayed cow manure be incorporated with the soil. Nearly all plants in herbaceous borders are gross feeders, and require to be grown in deeply cultivated, well-manured ground; in poor soil they are soon affected by drought in summer.

The best seasons to plant are in spring, when the plants are just emerging from their winter resting period, or in October, while the soil is yet warm, thereby giving them a chance to get a root-hold and be better able to withstand the winter. The latter date is the best time for rearranging an existent border, for the height and habits of the various subjects are then readily seen. Great care must be taken, however, not to plant when the garden is in an excessively wet condition after frequent or heavy rains; as working the soil in an effort to plant, when it is in a state of puddle, only tends to batter the border down, with the result that when dry it becomes caked and does not resume its open condition again during the entire season.

As to a rule which may be followed in planting, this is rather a difficult matter on which to give advice. If all the classes were of like habit it would be easy; for instance, an erect-growing subject, such as Japanese Iris, which on most soils grows to a height of 3 feet, should be set out at a distance of 18 inches from plant to plant (or half its height). This rule can be followed only when one has an intimate knowledge of the subject being dealt with. Take, for instance, *Gypsophila paniculata*, attaining a height of 2 feet, but making, in its first season, a plant 3 feet in diameter. If this were planted at a distance equaling half its height, one would have at once a case of overcrowding, and this must

be avoided, as we cannot get the effect if sufficient room is not given for full development.

In planning the border care must be taken to select varieties that will give a continuous display, and so arrange them that height, color and time of flowering are carefully blended, while the taller and more robust should be kept at the back of the border, and the dwarfers at the front. However, it is well to have a few taller-growing varieties interspersed throughout, so as to give a more natural appearance which is so necessary in any planting scheme, and yet so often neglected. Such plants as are chosen for this purpose should be of choice character, as they occupy the most prominent positions in the border.

If the border be a wide one, a much more effective result will be secured if clumps of three plants of each variety be planted, but if only a narrow strip is at liberty for a perennial garden, then single plants would have to be used. There is always a danger, in narrow borders, of employing too many varieties, causing the border in summer to be crowded with an endless variety of plants. Space should be left between the permanent subjects for planting in summer a selection of the following, which can all be had in separate colors, and therefore set to blend with the other plants:

Antirrhinums	Cosmos	Zinnias
Phlox Drummondii	Salvia Bonfire	Asters
Centaurea (Cornflower)	Cannas	Verbenas

Most of these plants are annuals, but can be employed with good effect in the mixed border. Ordinary bedding plants, such as Geraniums, Heliotrope, etc., should not be employed, as they look out of place, and we can get plenty of variety without them.

CARE DURING THE GROWING SEASON

During the early summer months when the various specimens in the border are growing rapidly, constant attention must be given them, as it is only by strictly looking after the smallest details that a full measure of success can be attained. The work of staking and tying should not be left until the shoots get top-heavy and begin to droop about, or have become broken by high winds and heavy rains. Damage done by storms to neglected plants cripples them for the entire season, but this can be averted by timely attention. Delphiniums, Lupinus and Peonies, to mention only a few, should all be supported early in the season. Avoid tying the plants in shapeless bundles. It is much more natural to have them laced up neatly, or a stake given to each strong stem and



A walk bordered with Hardy Perennials



Hardy Perennials as a foreground to Shrubs

placed in the ground at angles which will allow of the plant being opened up to allow air and light to penetrate. Keep the surface of the soil frequently stirred up during the entire season around the plants; this aerates the soil, encourages growth and keeps down the weeds. If the weather be dry and hot, give the border a thorough soaking with clear water and then give a mulching of short, decayed manure, leaf-mold, or the rakings of grass from the lawn. Any of these will be found very effective in retaining the moisture.

It will also be necessary to give attention to the removal of old flower-stems, not only to preserve a neat and tidy appearance, but, as in the case of Delphiniums and Pyrethrums, a great many species respond to this treatment with a second and very often a third crop of flowers during the season. Remove all decayed foliage and where the stronger-growing sorts are throwing up a great number of shoots, reduce their quantity without delay, allowing only a sufficient number that will develop properly.

PROTECTION IN WINTER

Somewhere about the end of November, or early in December, it will be necessary to afford a slight protection for some of the less hardy plants in the border. Not all of them require it. Species such as Phlox, Peonies, Oriental Poppies and Iris stand the severest winters without any damage being done, but when the growth has been cut back by frost or has died down in a natural way, the old stems should be removed and burned, and a covering of leaves or loose stable manure be given the sorts that are not able to stand extreme cold. It is well to give only a slight covering, for if they are covered too heavily the protection causes the plants to start into growth too early in the spring, with the result that they are crippled by late frosts. As the weather begins to moderate the covering should be removed, but only by degrees; this gives any new growth the plants may have made a chance to harden off gradually. After a few days it will generally be found safe to uncover them altogether, allowing them full sunshine. Some perennials are better protected by storing in frames or cellars for absolute safety, but as we intend to give cultural directions for some of the most popular, the ones to be treated in this manner can be mentioned as we come to them.

RENOVATING THE PERENNIAL GARDEN

It is often stated, and pretty generally supposed, that once your border of perennials is planted no more attention need be given for several years, whereas, if one is to have good results, the collection must be gone over early in October and attention paid to each subject. This is an operation which is performed in every well-ordered garden where an intelligent gardener is employed. In some cases a new scheme of colors

may be desired, in others new plants are to be introduced, and room must be made by the removal of old ones. If the work be done in the early fall, while the relative heights, etc., of the various plants can be seen, there is more likelihood of placing them in their proper positions. When single plants or groups have to be replaced, the ground should be deeply dug as far around as possible, without undue disturbing of neighboring plants.

If the soil is inclined to be impoverished, new soil should be put in to encourage the plants to establish themselves easily. The earlier this work is taken in hand, the better. The only drawback is that if extensive overhauling is to be done the display of flowers will be curtailed, while if left to themselves the plants might bloom for weeks longer.

Certain plants grow very large in one year and require lifting and dividing, while others are best left in the ground for three and even four years. Species such as the Asters, *Helianthus*, *Rudbeckias*, etc., the original crowns of which die out each year and are replaced by numerous new side growths in the fall, would, if left for two or three years, deteriorate to an amazing extent, the foliage would become dried up early in the season and the size of the flowers would diminish. These subjects should be treated every year, while such things as *Peonies*, *Helleborus*, etc., are impatient of removal and should be left for at least three years, the only attention they require being a liberal dressing with a mixture of fresh soil and well-rotted manure in equal parts each season.

Great diversity of opinion exists as to which is the best class of plants to use. Many advocate and expect clumps lifted from the open ground, and for autumn planting there is a good deal to be said in favor of this idea, as a large, field-grown plant is more able to take care of itself in a trying winter than is a plant which has probably been confined all summer to a 3-inch pot. There can be no doubt, however, that a good, strong plant from a 4-inch pot is the best for spring planting. This has been grown in the open ground all the previous year, lifted in the autumn, divided into sizes to admit of going into this size of pot, but still sufficiently strong to give a good display the same year as planted out. There is much to be said for this method. The plant is established when the purchaser receives it, the ball of earth is unbroken, and the tender rootlets receive no check when transferred to the border, consequently any young growth the plants have made very rarely or never flags, even in dry weather. This method also gives the prospective planter a longer period in which to do his planting; for instance, if one has a border of *Tulips* or *Hyacinths*, by the time these have done flowering a great many of the hardy plants have made so much growth that it would be a considerable check to shift them, and in a good many instances a dead loss, whereas when one knows that he can get perennials which are grown in pots he can afford to get the best out of his spring-flowering bulbs and still be assured of a good display when they are replaced by established plants.



Easily Grown Hardy Border Plants, and Cultural Notes

In dealing with these it is our intention to draw notice to a few of the most popular classes which should be planted in every garden; all will be found useful in a cut state, with the exception of a few kinds that are indispensable in the front of a planting and yet too short of stem for decorative purposes. These are all very easily grown, requiring only good fertile soil, with the weeds kept down; they all delight in an open, sunny position. Among the taller subjects, and taking them in alphabetical order, the first we strike is *Anchusa*.

***Anchusa* • Alkanet; Sea Bugloss**

While not of much account as a cut-flower, the improvements which have been made on the old Italian Alkanet have brought it into great prominence during recent years. It is among the best of the taller-growing blue perennials, coming into flower before the Delphiniums, and continuing to bloom during the entire summer. The **Dropmore Variety** will grow from 3 to 6 feet high, according to the food-supply available, its tall spikes being loaded with relatively large flowers of the purest gentian-blue. The variety **Opal** is an exact counterpart of the above, save that the flowers are of a fine, lustrous blue. The *Anchusas* are moisture-loving plants and require copious soakings of water during the growing season.

***Anemone japonica* • Japanese Windflower**

One of the most gorgeous of the hardy garden perennials, as well as one of the most useful and desirable, having a range of color from pure white to deep, rich crimson. They like a good soil, which must be well drained, and they absolutely revel in sunny, exposed positions. Commencing to bloom in August, they continue to clothe their stems with a wealth of bloom until severe frosts cut them down. As they grow to a height of from 2 to 3 feet, they are invaluable as cut-flowers for table decoration, lasting a long time in water.



Anemone japonica



Aquilegia (Columbine)

ANEMONE, continued

They can be used in solid beds or planted in clumps in the border. This is one of the subjects which are best left alone for a number of years. It is only when well-established that they are seen at their best. A covering of leaves will enable them to withstand the hardest winter.

They require deep, rich soil and should be planted in the spring as early as possible. Some of the older varieties of Anemone are well known in the English garden as Pasque Flowers, while the newer sorts of Japonica type were introduced from Japan in 1844.

Aquilegia (Columbine)

The Columbine is one of the most highly prized of our late spring hardy plants, both as a decorative cut-flower and by reason of the beauty of its rich, dark green foliage and graceful spurred flowers. It should be grown in quantity, being easy to establish and thriving in almost any situation.

Cærulea (Rocky Mountain Columbine). Grows to a height of 15 inches, and is one of the loveliest species. The true plant is scarce, and has long-spurred, wide-open flowers, nearly 3 inches across, of pale lavender and white, delicately suffused with lilac.

Chrysantha. Grows 2 to 3 feet high; golden yellow, shading to primrose-yellow; is a good tall-growing variety.

There are also many beautiful hybrids, as well as species in cultivation. They are of easy cultivation and are propagated by seeds or root divisions.

Artemisia lactiflora

This charming plant, which is of practically recent introduction, is at its best in a heavy loam that has been enriched with plenty of well-rotted manure. The flower-stems grow about 4 feet high, and the blooms expand during the latter half of August, continuing to give an abundance of white, sweet hawthorn-scented blossoms until the end of September. The spikes are light and graceful, not unlike a Spirea, and as it is at its best during a season when it has no competitor, it is a most valuable introduction. The habit of growth is pleasing and the foliage distinctly ornamental, being finely lacinated. This specimen is especially suitable for waterside plantings.



Aster Novæ-Angliæ

Hardy Asters · Michælmas Daisies, or Starwort

These are among the showiest of our hardy perennials, and are to be had in flower from July until late November. They thrive in almost any situation, but are possibly seen to best advantage when cultivated in a border entirely by themselves, where a comprehensive collection may be grown and the varieties tested and compared. Such a border is intensely interesting, even if carried out on a small scale, and when the chilling autumn winds have almost denuded the garden of its summer glory, the Hardy Asters will be seen in all their beauty.

These are also indispensable in the mixed border, especially the blue and lavender sorts. They provide a shade of color which is a pleasing relief from the yellow, scarlet and white of the average border. The flowers are little injured by moderate frosts. Of the early varieties, **Amellus**, **Beaute Parfait**, 1 foot, blue, flowering in July and August, and **Perry's Pink**, a new variety, with large, pink flowers and flowering at the same time as the first named, are the best in this class.

Abendröthe. Rosy red; a very choice variety. The flowers are borne in large clusters on long stems. 2½ feet.

Aster ptarmicoides major is a compact-growing, white variety, with medium-sized flowers, but withal a lovely sort for the front of the border.

Beauty of Colwall is a distinct novelty, with perfectly double flowers of a pleasing shade of lavender, very freely produced on stout, erect stems about 4 feet high. September and October.

Beauty of Ronsdorf. Lilac-rose; branching habit. 15 inches high. August to October.

Thompsoni nana. Blooms continuously from July to November; the pale lavender flowers are very attractive. 18 inches.

Climax, which is one of the best of the taller and newer varieties, has clear, light blue flowers on long stems.

White Climax. A splendid companion to the above variety, the only difference is in the color.

The best in the **Novæ-Angliæ** class are: **Lil Fardel**, 3 feet, rose-colored; **Mrs. J. F. Raynor**, 3 feet, rosy red.

The **Novi-Belgii** type is well represented by **Climax** and **Beauty of Colwall**, already mentioned; **St. Egwin**, with large flowers of clear rose-pink; **William Marshall**, mauve; and **Beatrice**, white.

The clumps of Asters should be lifted and reduced every season, and only from five to seven of the strongest shoots from the outside of the plant retained and planted in their old situation, after a supply of manure has been dug into the soil.

Campanulas

This family of hardy garden plants cannot be too highly recommended. It combines a varied range of habit and color. The dwarfier varieties are useful in rockeries and are not, as a rule, hard to cultivate. The best known, possibly, are the **Canterbury Bells**, which can be had in white, blue and pink. They should be planted as early in spring as the ground is in condition; the habit of the plant is compact, the flower-spikes will often attain a height of 3 feet. The foot-stalks should be staked up with thin yet strong canes to prevent damage by wind. They look well when associated with early Phlox.

The *Persicifolia* varieties, of which the new **Mørheimi**, with its double, white flowers, is the best, are also very useful and ornamental and bloom profusely through a long flowering season.

The **Chimney Campanula** (*Pyramidalis*), blue, is largely grown in pots, but this old-fashioned plant is also valuable for the flower-border. It is quite hardy, and will succeed best if a little rich loam is added to the soil at planting time. Seedling plants of this variety exhibit different shades of blue. They have a long flowering season and produce their flowers in rich profusion.

Pyramidalis alba is also a desirable border plant and often reaches a height of 6 feet. It may be grown in association with the blue variety, being a fine white. The flower-spikes should be staked early to prevent their being snapped off at the base in stormy or windy weather.

The varieties of **Carpatica**, white and blue, are very pretty, dwarf-growing kinds, about 9 inches high, and flower from June to early October.

If the flowers of Campanulas are cut as they fade, it greatly prolongs the blooming period of the plant.

Keep the ground clean and do not allow them to suffer for want of water.

Hardy Chrysanthemums

The indiscriminate planting of blazing clumps of color, irrespective of the effect on their surroundings, is rapidly becoming the exception rather than the rule, and it is pleasing to find an ever-growing demand for dainty combinations and harmonious blendings of color among the gardening public. This demand cannot be satisfied by simply filling beds or borders with blazes of red and yellow.

The Chrysanthemum has such a wide range of color that scarcely anything desirable is unattainable. It matters not whether one wishes the brilliance of scarlet, the warmth of crimson, the softer hues of pink, lilac



Campanula (Canterbury Bells)



Hardy Chrysanthemums

HARDY CHRYSANTHEMUMS, continued

or mauve, or the brightness of gold, vivid contrasts or gradual shadings can be had practically throughout the whole range of the color world.

The Hardy Pompon types, while not giving the size of flower which one finds in the early-flowering English varieties, begin to flower a month later and continue to beautify the garden despite the early frosts. They should be planted in well-drained soil and be given liberal treatment to get the best out of them. The early-flowering varieties are excellent as cut-flowers, and if disbudded form handsome specimens on long stems, suitable for decorative purposes. It is a question whether (when these become better known) they will not entirely supersede the smaller type of Pompons now in general use. The blooms often measure $3\frac{1}{2}$ to 4 inches in diameter. Those who are not yet acquainted

with this type of Chrysanthemum on seeing them for the first time, will realize their wondrous beauty and free-flowering qualities. The best way to winter them is to lift the clumps and place them in a coldframe, giving a slight covering of leaves. They can very easily be propagated in spring from cuttings in the same way as the exhibition varieties.

Any attempt to enumerate the best varieties would be fallacious, especially in the Pompon group, as each florist has his own list of best sorts and one cannot go far wrong in making a selection from a catalogue.



Delphinium (Larkspur)

Delphinium**Larkspur**

The perennial Larkspurs are among the most useful and effective of hardy plants. Like most herbaceous plants, they revel in a deeply cultivated, well-man-

DELPHINIUM. continued

ured soil, otherwise their flowering period will not be of long duration. Be sure the manure is deep enough for the roots not to reach it when first put in. If the soil is rather heavy and rough, a little leaf-mold or old potting soil may be worked in around the roots; this will act as a quick-rooting medium, allowing the plants to get a good start, as well as helping them generally.

Delphiniums can be planted with good effect almost anywhere—in beds, in clumps, in the shrubbery, in mixed borders or in natural gardens. These plants are easily propagated by divisions of the stools, so that when disturbing large clumps they may be divided for this purpose. Seeds may also be sown in March indoors and they will provide plants that will flower the same fall.

The variety **Belladonna** is a beautiful sky-blue, of dwarf habit; it flowers all summer until cut down by frost.

Formosum is a dark blue, with a white center.

Belladonna Semiplena is one of the finest yet introduced; it is of remarkably strong growth, with flowers of gigantic size, semi-double and of a deep blue, with a distinct white eye.

Chinense azureum Plants grow but 2 feet tall, branch freely, each branch terminating with a loose spray of single flowers; color a deep clear blue.

Chinense album. Same as above but white.

Michell's New Hybrids, Mixed. These are the cream of seedlings from a famous strain of English varieties.

Queen Wilhelmina, Capri and Amos Perry are other excellent sorts with large flowers of various shades of blue.

To insure continuous flowering of Delphiniums, cut off the old flower-stems as soon as they are past their best.

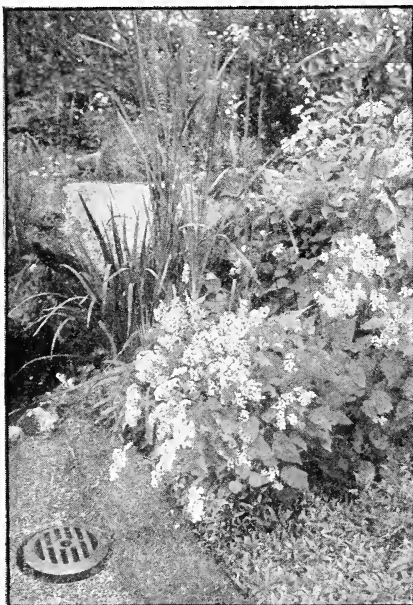
Digitalis • Foxglove

These old-fashioned plants, commonly known as Foxgloves, thrive in almost any soil and adapt themselves to almost any conditions, but they prefer an open, sandy soil. They are excellent subjects for the back of the border or for grouping in beds. They should be sown out-of-doors as soon as danger of severe frost is over, in beds of fine soil; cover the beds with about one-eighth inch of soil and press down fairly firm. Transplant into permanent quarters as soon as they are large enough to handle, so they will become well established before severe weather sets in.

Gloxiniæflora is the best, and the variety most often grown; this can be had in lilac, pink, purple, white and spotted.



Digitalis Foxglove



Eupatorium

plant, with Ageratum-like spikes of blue flowers, which appear from August until frost. Height, 2 feet.

These should be lifted and divided every two years.

Eryngium • Sea Holly

Alpinum (Alpine Sea Holly). Grows 2 to 3 feet. This fine variety should be in every garden. It can easily be classed among the best dozen herbaceous plants. The large, shining, bright green leaves are in themselves exceptionally beautiful, but they are eclipsed by the rest of the plant. The stems and large flower-heads are of an exquisite steel-blue, and are set off by bracts which look like steel or burnished silver.

Oliverianum. Grows 3 to 5 feet. This is, in its way, as good as Alpinum. The flower-heads are not so large, but they are of a richer and darker blue, with blue stems.

Polychroma (Sun Spurge). This is the best in this class, and stands out with wonderful effectiveness and distinction. The stems have a bright red tinge, the leaves and bracts are a cinnabar-red, mingled with reddish orange. In its autumn days the whole plant is a picture of brilliance; it is perfectly hardy and stands without any protection. It attains a height of from 12 to 18 inches.

Of the other varieties, **Maritimum** and **Amethystinum** are worthy of mention.

Funkia • Plantain Lily

This class of perennials is, for the most part, very ornamental and produces attractive clumps of foliage and rather interesting, lily-like flowers. Funkias delight in moist situations, and the foliage of some of them is extremely beautiful and very useful for bedding purposes.

The variety **Undulata media-picta**, with its beautifully variegated leaves of green and silver, makes a splendid border along drives or walks and is very pretty as a pot-plant. It has lilac flowers. **Subcordata grandiflora** has handsome spikes of white flowers with a delightful fragrance, and large, glossy green leaves. **Cærulea** produces spikes of light blue flowers and foliage of the same color as Subcordata. **Minor alba**, a miniature variety, with large, white flowers.

These are four of the best of this useful class of plants.

Doronicum • Leopard's Bane

This is one of the earliest and best of our hardy plants which are suitable for cut-flowers. They are best planted in large clumps or masses. If lifted and divided every two years they will continue to give large blooms very suitable for decorative purposes.

The best varieties are **Excelsum**, with its rich orange-yellow flowers, $3\frac{1}{2}$ inches across, and **Caucasicum**, a very free-flowering, bright yellow.

The flowers close toward the end of the day, opening up each morning. These are also suitable for planting in shady positions.

Eupatorium

Perennial Ageratum

Very ornamental, tall-growing plants for the hardy border, always conspicuous when planted in clumps.

Ageratoides has numerous compound heads of pure white flowers and is useful for cutting; it grows to a height of 3 feet.

Cœlestinum is a compact-growing

Gaillardia • Blanket Flower

The Gaillardia makes a fine subject for the mixed flower-border, and is an invaluable plant for dry, exposed positions. In dry seasons it is doubly valuable and should be grown largely on this account. The plants should be set out in clumps of three, and the shoots laid out and pegged down, otherwise they present a rather straggling appearance. The flowers are very useful for decorative purposes and last a long time in water. They begin to flower in June and their handsome blossoms of a reddish brown, with tinges of scarlet, orange and vermilion, continue through the entire season. They add a touch of strong color to the perennial border such as no other flower will. Seeds sown at the same time as *Digitalis*, and treated in the same way, will well repay the small expense and trouble.

Gypsophila

Paniculata (Baby's Breath, or Gauze Flower). This well-known, indispensable, decorative plant possesses a usefulness and grace, with its cloud-like masses of small white flowers, that make it a favorite everywhere. In a cut state and in combination with brightly colored flowers it is very ornamental, as it enhances the beauty of all flowers with which it is combined in a bouquet or spray.

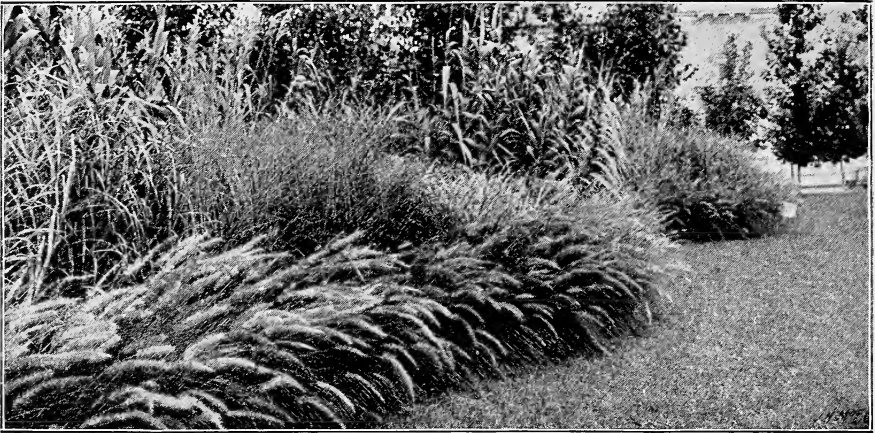
During August and September these are a mass of delicate flowers. These may be used as fresh cut-flowers; also for a semi-everlasting effect. They keep perfectly for months without water.

The varieties *Cerastioides* and *Repens* are excellent subjects for the rock-garden, as they are low-growing.

Gypsophila Paniculata can be used in a dried state, for which purpose it should be cut when in its best condition and suspended inverted in a clean, dry place. It makes a fine winter bouquet by itself, and combines very beautifully with all kinds of "everlasting" flowers.



Gaillardias



Planting of Ornamental Grasses

Ornamental Grasses

It is surprising to find so little use made of the many beautiful varieties of Hardy Grasses. If the extremely ornamental effects that can be derived from them were more generally known they would be planted much more extensively. Generally speaking, they are best planted in beds by themselves, using the taller ones in the center, but isolated specimens on the lawn are very pretty.

These are moisture-loving subjects and do well planted by the side of a stream or pool.

Most of the Grasses like a rich, heavy soil and an abundance of water.

Gynerium argenteum (Pampas Grass) is a variety which shows to great advantage when it is interspersed among the medium-high plants in a perennial border. It bears handsome plumes which are excellent for making dried bouquets for use in the house during winter.

Arundo Donax is the tallest variety, reaching a height of from 10 to 18 feet.

Arundo Donax variegata is the most bold and striking of the variegated kinds; its green-and-white stems reach a height of 8 to 10 feet.

Elymus glaucus, a beautiful grass, with glaucous silvery foliage; grows 2 feet high.

Erianthus Ravennæ (Hardy Pampas Grass) will grow 10 to 12 feet high under good conditions.

Eulalia japonica and its varieties are very pretty, the variegated sorts extremely so.

Phalaris (Gardener's Garter) is excellent for bordering large beds, and very beautiful in the wild garden.

Helenium • Sneezewort

The Sneezeworts are among the best of the hardy flowers and can be had in bloom from June to September. They last a long time cut, and are good as specimens in the border, for hiding ugly fences, or for the woodland garden.

The earliest to flower is *Hoopesii*, 2 feet, which has bright orange flowers, and continues in bloom from June to early September.

Autumnale superbum, with its clear golden yellow flowers, rising to a height of 5 feet is the largest of all, and can be had from August to October.

Autumnale rubrum is in all respects, except color, like *Superbum*; the flowers are of a rich terra-cotta.

They like a sunny location and are very hardy and floriferous.

Helianthus and Heliopsis

The Hardy Sunflowers and their near neighbors, the Orange Sunflowers, are very much alike in habit, the latter being the dwarfer-growing of the two species. They are both exceedingly free-flowering, succeed in almost any soil or position, and are very valuable as cut-flowers during the late summer and autumn.

They are very effective in borders, among shrubbery, or as clumps on the lawn, etc. *Maximilianii* and *Multiflorus nanus* fl.-pl. are the best of the *Helianthus*.

In the *Heliopsis* class we have *Pitcheriana*, which is a fine deep golden yellow variety, growing 36 inches high, blooming during July and August; good for cutting. This beautiful variety should not be omitted from any collection of Hardy Perennials.

They are excellent for city culture. The flowers are of shades of yellow, and show up well in the back row of a border or in the woodland garden.



Helianthus orgyalis (Sunflower)

Helleborus niger • The Christmas Rose

This old type, with its beautiful white flowers, will, if protected by hand-lights, come into bloom as early as December; in fact, to keep the flowers clean and at the same time induce the plants to throw up long, straight stems, this is necessary. One of its greatest assets is its ability to grow luxuriantly in shade, where it is difficult to persuade many plants to exist. They are very impatient of removal, but when once established continue to give satisfaction for years.



Helleborus niger (Christmas Rose)

Hemerocallis

The Yellow Day Lilies grow anywhere, in either partial shade or full sunshine. They are perfectly hardy, with the exception of *Aurantiaca major*, which requires protection. They are good for borders, shrubberies or for naturalizing. They like lots of moisture and do well planted on the banks of ponds. They can be increased by division.

Aurantiaca is a sweet-scented, Indian yellow Lily, growing 3 to 4 feet high.

Aurantiaca major, with its deep orange flowers, is one of the best; it grows 2 feet high.



Border of Hemerocallis

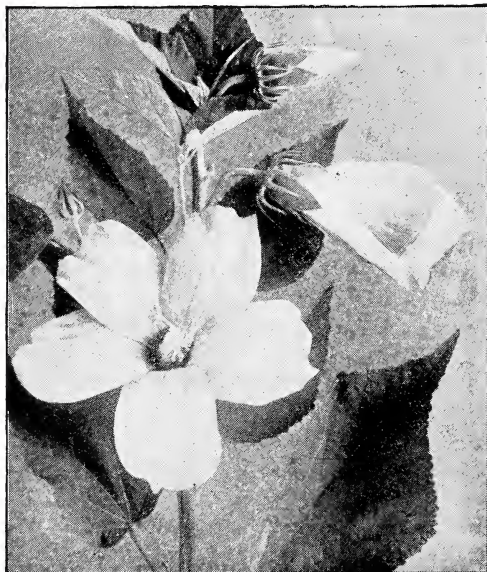
HEMEROCALLIS, continued

Dumortierii, 1½ feet, is a rich, yellow-orange, tinged with brown on the outside, and has a splendid, free-flowering, dwarf habit.

Flava, the Yellow Day Lily, produces fragrant lemon-yellow flowers from June to August. This is, perhaps, the best-known variety.

Fulva and its double-flowering form grow from 4 to 5 feet, and have trumpet-shaped, orange flowers.

Kwanso flore-pleno. Large, double, orange flowers, with darker shadings. 4 to 5 feet. July and August.



Hibiscus (Mallow)

Hibiscus • Mallow

These are among the most gorgeous of perennials, attracting attention wherever grown. They should have plenty of room to develop properly.

Moscheutos, the Swamp Rose Mallow, is of a deep rose-color, with a darker eye.

Crimson Eye, with its immense flowers of purest white and deep crimson eye, is a pretty and a popular variety.

Meehan's Mallow Marvels are a great improvement on the other varieties. They are of upright habit, can be had in three distinct colors, Red, Pink and White, are extremely floriferous, producing an abundance of flowers 9 and 10 inches in diameter; they are quite hardy and seem to do equally well whether in a dry or a wet situation, and grow to a height of from 6 to 8 feet.



Hollyhocks

Hollyhocks

For some time the cultivation of these stately plants was next to impossible owing to the attack of rust fungus. This seemed chiefly to attack the old plants, but can be seen on many plantings of seedlings. In many cases it has been found, however, that by growing young stock each season the disease has not been so prevalent. Though fairly good results can be obtained by sowing seed in the spring, stronger plants will be obtained by sowing in August or September. Sow the seeds in trays of light, porous soil and place them in a cool, shady place until germination takes place. As soon as the plants are large enough, pot them into 5-inch pots and grow them on. Quite hardy, sturdy clumps can thus be obtained for planting and flowering the following year. The disease may be kept in check by spraying them occasionally during the early stages of growth with bordeaux mixture. They delight in a deeply dug soil, well enriched with thoroughly rotted manure, and should have copious supplies of water during dry weather. A slight protection around the collars of the plants should be provided in severe weather.

Hollyhocks can be had in ten to twelve separate colors, double or single.

Iris Germanica

These border plants, known as German or Flag Iris, are exceptionally hardy. It is practically impossible to kill them. They luxuriate in towns, under trees and in other most unfavorable locations, and yet for sheer beauty of form and color they put to shame many of the orchids. In planting, barely cover the rhizomes; when established these can be covered entirely. For best effect they should be planted in bold groups. Dig in the manure used rather deeply, so that the roots can reach it after they have been growing for some time.

The German Iris can be had in a wide range of color, from the pure white of *Innocenza* to the deep blue of *Kharput*.

Some of the best varieties are *Gypsy Queen* and *Her Majesty*, lavender; *Innocenza* and *Florentina*, white (both of which are highly prized for church decoration); *Honorabilis*, a very fine golden yellow, shaded rich bronze variety.



Planting of German Iris

IRIS GERMANICA, continued

Pallida Dalmatica, the finest of the Flag varieties, with tall stems of very large, pale blue flowers and broad, glaucous foliage; *Madame Chereau*, white edged, light blue; *Queen of May*, light pink, very early.

No garden is complete without a planting of Iris; they thrive almost anywhere.

Iris Kaempferi; syn., *Iris lævigata*

The Japanese class is probably the most beautiful and popular of all the Iris, but unfortunately it does not adapt itself to the same kind of treatment as do the German varieties. Although best fitted for association with water- and moisture-loving plants,



Iris Kaempferi

the waterside is by no means essential, if the soil be well tilled and they are not allowed to suffer during the growing season for lack of moisture. They enjoy a rich rooting medium, and unless the soil is substantially rich, a portion should be removed and replaced with loam and well-rotted manure. Old established plants should be taken up and divided and those which are not disturbed should have the soil well stirred around them and be kept free from weeds. Apart from their individual beauty, they are valuable for prolonging the Iris season, and they are fine for cutting. Lightly fork up the soil in April and give a top dressing of well-rotted cow manure.

A selection of these that will cover a flowering period from the middle of June until nearly the end of July can be made from any catalogue.

Iris Sibirica

One of the most elegant of all Iris groups and among the easiest to grow; has grassy foliage with tall flower-stems; highly floriferous; one of the best for cutting.

Alba. The white form, veined with purple and brown.

Orientalis, Blue King, is a beautiful, rich, deep blue, just as fine as that of the gentian. It is one of the handsomest of the species.

Orientalis, Snow Queen. A new white-flowered variety of the type, petals broad and full, of snowy whiteness and rich golden yellow blotch. Fine to use as a cut-flower.

These are three of the best. This class succeeds well in moist positions.



Spanish Iris

Bulbous Iris

Both Spanish and English Irises should be planted in early October. The bulbs are inexpensive, and they should be planted not only in the flower border but in any spare piece of ground. They grow best in a light, porous soil, and if the soil is of a heavy, retentive nature, it can be rendered more amenable by adding leaf-soil or manure from an old mushroom-bed.

The Spanish Iris blooms before the English varieties, and though the flowers are smaller they are valuable on account of their earliness. Of the Spanish section, **Chrysolora**, yellow, **King of the Blues**; **Snowball**, white; **The Pearl** and **Beauty** are all good.

Half a dozen choice English sorts are **King of the Blues**, **Alba grandiflora**, **Electric**, **Blue Celeste**, **Daylight** and **Mont Blanc**.

Intermediate Iris

The Intermediate or Interregna Irises comprise a new and already considerable class of hybrids, derived principally by crossing the dwarf, early-flowering *Iris pumila* with the later-flowering Germanica. As they come into flower earlier than the German class, and possess all the best points of both parents, they will be found of great garden value. They are of free growth and easy culture, very free-flowering and of beautiful soft shades of color. Among the best are **Fritjof**, **Ceres**, **Charmant**, **Halfdan**, **Helge**, **Ingeborg** and **Walhalla**.

Iris pumila

Excellent plants for rockeries, forming low tufts of dwarf flowers of a type especially adapted to bordering; if planted in a double row about 4 inches apart they make a beautiful and effective edging.

The **Bride**, white, **Violacea**, dark blue, and **Lutea**, yellow, are three good varieties.

Lilies for the Hardy Garden

Lilies are derived from nearly all parts of the northern hemisphere, and are mostly found growing in a fairly good soil, in company with other plants, such as shrubs, whose foliage shades their roots and helps to keep them in a uniform state of moisture. The majority of Lilies require a soil fairly rich in vegetable mold. They should be planted 3 inches deep in almost all cases, and to insure them against rotting in the ground before root action takes place, they should have a dressing of clean sand all around the bulbs. This also prevents pests of various kinds from getting at them, and allows any excessive moisture to pass away freely.

All Lily bulbs will root more quickly if a few handfuls of peat, finely broken up, are placed under the bulbs when planting them. All the varieties require plenty of moisture when growing freely, and any check for want of water will retard the development of the gorgeous spikes of flowers which they are capable of producing; besides, a Lily once checked by reason of drought or by any other cause rarely recovers its health.

Lilies of the Auratum type are shade-loving plants, and should be located where they will not have to contend with the direct rays of the midday sun. Care should be taken, at the same time, that to attain this end they are not planted where the roots of trees or shrubs will rob them of the moisture and nutriment intended for them.

The **Golden Rayed Lily of Japan** (*Lilium auratum*) is so well known that it needs no description. No garden is complete without it, and no Lily gives the same floral

effect for such a small cost. Its flowers, borne in August, are of pure white, spotted crimson, with yellow rays down the center of the petals. Good, large, ripe bulbs will produce as many as fifteen to eighteen flowers on a single stem.

Browni. This is one of the finest Lilies in cultivation. It bears immense, trumpet-shaped flowers, the brown anthers forming a great contrast to the white of the cup; outside of petals reddish brown. This variety requires a good soil, deeply worked and in fair condition as regards moisture. They succeed well when their roots are shaded; a good plan is to intersperse hardy ferns among them. June and July is the flowering period.

Candidum. This belongs to a group of very hardy Lilies, thriving in any good garden soil, with very little attention. This White Madonna Lily, emblematic of purity, and one of the finest of garden flowers, is endeared to many of us who have wandered through the country villages in Europe and seen it in all its beauty, seemingly receiving no attention, thriving as well, or even better, in the gardens of the poor than in more favored situations. Various kinds of soil and environment seem alike to suit the Lily of the Annunciation, for in sunshine and shade, in light and heavy soils,



Lilium candidum

LILIES, continued

in dry and damp positions, it seems equally contented, filling the air with its perfume and during its all too short flowering period contending with the Rose for its position as Queen of the Garden.

Canadense, the Canadian Lily. Flowers vary from yellow to orange, bell-shaped, heavily spotted inside. This variety is very graceful and pretty; likes plenty of moisture and produces large quantities of flowers when established.

Canadense rubrum is the same as the above, except that the exterior of the petals is red; they both flower during June and July and attain a height of 2 to 3 feet.

Melpomene. This variety belongs to the Speciosum group, the flowers of which are all large, open and spreading. The growth and habit of this sort is quite distinct. It bears blooms of great substance, dark crimson-purple, heavily spotted and margined white. Lilies of the Speciosum group are all especially adapted for naturalizing and general border planting, all being strong, vigorous growers.

Speciosum album. This is the best late white Lily that can be planted. It bears flowers of purest white with a band of palest green down the center of each petal. Flowers in September.

Speciosum magnificum. This variety is by far the most magnificent of all the Speciosum Lilies. The stems are very stout, leaves a rich, dark green, and flowers from 6 to 8 inches across; the color is a rich ruby carmine. Its foot-stalks bear as many as ten to fifteen flowers.

Speciosum rubrum is a very pale blush, heavily spotted rich, rosy red. All these varieties of Speciosum Lilies last well on into the autumn, producing their flowers when Lilies in general are long past.

Tigrinum splendens (Tiger Lily). This magnificent Lily may be recommended as a most satisfactory variety, and one worthy of extensive cultivation. It is very hardy, and will thrive almost anywhere and in any ordinary soil. The plant has a strong habit, growing to a height of from 4 to 6 feet, and bearing immense spikes of orange-scarlet flowers, spotted black. Whether planted in clumps in the mixed border, in the shrubbery, or in the wild garden, this Lily is most effective and is one of the most satisfactory for outdoor planting.

Tenuifolium. This dainty Siberian Lily, whose brightly colored Turk's Cap flowers of bright scarlet are borne on slender stems, is very graceful indeed, and is greatly admired wherever seen. It flowers late in May or early in June, according to the season, is extremely hardy, strong and vigorous.

Lavender**Lavendula vera**

This is in constant demand, as it combines an attractive appearance with a delightful perfume. As an edging for a border of flowering shrubs it is unrivaled. Two plants which go well with Lavender when planted in beds are *Santolina incana* (Cotton Lavender) and Rosemary. They are very easily propagated. Cuttings inserted in a coldframe in September will root readily and carry over the winter with slight protection.

**Liliun speciosum**



Lupinus

Lupinus • Lupins

These popular plants, blooming in May and June, can be had in Blue, Pink and White. When established they are very effective, producing their large spikes of flowers in great abundance. They require a well-prepared soil, and should never be allowed to suffer for want of water. They do not thrive where there is much lime in the soil. By cutting off the flower-stems when past their best they may be induced to give another crop of flowers in the autumn. They may be planted in the fall or in the spring, and are perfectly hardy and free from attacks by either insects or fungous pests.

Lobelias

These handsome and useful perennials are extremely interesting on account of the beauty of their blossoms. They are of fine, handsome aspect and make a most striking and gorgeous display if planted among evergreens in the hardy border, or by the margins of pools. A deep, rich, moist soil is

best for them. The variety *Cardinalis* is perhaps the most generally used. Seeds may be sown in the autumn as soon as they are ripe, the plants from this sowing can be left undisturbed in the trays until early spring, when they may be potted singly into 3-inch pots. These plants will flower freely the same season.

Cardinalis is a very desirable plant by reason of its rich red foliage. These should be lifted in the fall and stored in trays of soil for the winter, very little water being afforded. If divided and potted up in February they will make fine plants for use in the border by the end of April.

Lobelia syphilitica, the native *Lobelia*, produces pale blue flowers during August and September, and grows to a height of from 2 to 3 feet.

Lychnis

This genus includes some of the best known of the old-fashioned flowers and no garden can afford to be unrepresented by a few of the varieties, the taller varieties being useful as cut-flowers and the dwarfer kinds making handsome edging for perennial borders or for use in rock-gardens. It needs a good garden soil and a sunny place.

LYCHNIS, continued

Chalcedonica, 3 feet, and some of its varieties, are among the best of border plants. The type has bright scarlet flowers in terminal heads, while *Chalcedonica flore-pleno* is a brilliant geranium-red and not unlike a double Geranium in appearance, except that the flower-heads are borne on stems a yard high.

Among the dwarf varieties, *Haageana*, 1 foot, is a bright, deep scarlet, which flowers in May. The Hybrids of *Haageana* contain shades of crimson, rose, scarlet, pink and blush, and produce a fine effect in masses.

Vespertina alba plena, 1½ feet, has large, double, white flowers which are borne in great profusion for the greater part of the summer.

Viscaria splendens plena is a brilliant, dwarf plant and forms a dense tuft of dark green foliage, with handsome, double spikes of rose-scarlet flowers somewhat resembling a Stock during June and July. A clump of this variety is very conspicuous and never fails to attract attention.

These are but a few of the varieties of Campion, such varieties as *Flos Jovis*, *Dioica rosea*, and *Sieboldii* being worthy of mention.

Monarda · Bergamot

This favorite plant is very ornamental in the hardy border. A few good clumps add a warm note of color and are in deep contrast to the numerous plants with yellow or white flowers which predominate from June to September. The improved variety, *Cambridge Scarlet*, has larger heads of deep scarlet flowers than has *Didyma*, the type.

On cold and wet soils the Bergamot has a tendency to die during the winter. In such a case a reserve stock ought to be lifted in the autumn, and placed in a coldframe for protection. In the spring these reserve plants can be divided into small pieces and planted again in the border. Give some rich soil before replanting, and the stock will readily respond to such generous treatment. *Salmonea*, salmon-pink; *Fistulosa alba*, white, and *Violacea*, purple, are with *Cambridge Scarlet* four of the best.



Perennial-bordered Walk



Peony Border

Peonies, Herbaceous

The Herbaceous Peony is a deep-rooting and gross-feeding plant, hence a deep, rich soil is essential to permanent success. In light soils it is a good plan to give frequent applications of manure water to help the plants develop and mature their crown buds. Nurserymen receive frequent complaints about the failure of Peonies to flower. The successful flowering of the plant depends greatly on the growth made the previous year, for good crown buds are necessary, hence it is important that the plants be kept growing in their season. After a summer of long-continued heat and drought the plants acquire a half-starved condition and the crown buds are much weakened. The result is diminished vigor in the leaf-growth. Great attention must, therefore, be paid to providing moisture in abundance and a sufficient food-supply.

In the case of plants which have been put down but one season, it would perhaps be advisable to allow them to remain in their present positions and give them frequent applications of liquid manure or a good mulching, but this is best done in September, when the root activity starts again for another season. In the case of old clumps, which have been in the same position for four or five years, and which by now may have exhausted the soil, divide and replant early in September. If you do your Peony planting when a couple of inches of new growth is on the plants in spring, then do not expect first-class blooms the same season. You will be among those who complain of the plants being impatient of disturbance, and so they are if disturbed at the wrong time. By the month of April the main roots have begun to grow, and if they are checked the plant has a struggle for bare existence all summer.

Never transplant Peonies in big clumps intact. In a big clump the majority of the buds are not in contact with the soil, and as the best roots emanate from the base of the crown bud or around it, the folly of planting abnormally large clumps is evident. Take the large clump, and with a hand fork split it by driving the fork in an inch or two below the crown. A good planting division should have no more than from four to six eyes. The roots of a Peony twine around each other, and if a knife were used a great deal of waste would ensue, but by wrenching the roots apart this waste is almost

PÆONIA, continued

entirely done away with. Do not plant too deeply; the roots should be covered with only about 2 inches of soil.

Order early in September—this is the best time. If this is not possible, then buy before growth starts afresh in the spring. By consulting a reliable catalogue one can find a good selection of varieties carefully tabulated. They can be had in almost all shades, from purest white and palest rose to deep crimson.

As Peonies are liable to damage by strong winds, they should be staked as a preventive. In a mixed border they have the disadvantage of looking untidy toward the end of the season, but this can be obviated by planting a few later-flowering plants, such as Chrysanthemums or Asters, in front of them.



Peony, Festiva Maxima

Pæonia arborea • Tree Peonies

The Tree Peony is one of the best available plants for the garden. It is remarkably hardy and does well under the simplest treatment. It grows in an astonishing manner and bears flowers from 6 to 8 inches across, increasing in size and beauty year by year. The flowers have a wide color-range and can be had from purest white to a deep, velvety crimson. It does not die down to the ground like the Herbaceous Peony, but forms bushes 4 feet in height, covered in spring with a wealth of elegant blossoms. The following double Tree Peonies will all be found acceptable, and will abundantly reward the grower with their lovely flowers.



Pæonia arborea

Abraham Lincoln. Amaranth.

Confucius. Purplish scarlet.

Jeanne d'Arc. Salmon-rose

Bijou de Chusan. Pure white, with yellow center.

Etna. Fiery red.

Lambertina. Pure white, suffused rose.

Rosea superba. Salmon-rose.



Oriental Poppies

Papaver orientale

Oriental Poppy

For a brilliant color display the Oriental Poppy has no rival among hardy border plants. The sight of a large clump of these is a most dazzling spectacle. The flowers are perfectly enormous, and they should be planted wherever a splash of distinct and glowing color is required. Their free-flowering qualities render them conspicuous in any position. The blooms are borne on thick, hairy stems, with strong, rough leaves, and if cut in the early morning they are excellent for house decoration.

Good, deep, rich soil and an open situation suits them best. After the flowering period the plants have a tendency to take on a dead appearance, but they return to vigor usually as soon as the weather becomes good. The places where they are planted should be marked to prevent their being disturbed with the hoe during their resting period. Give a good soaking of water occasionally during very dry weather, and a mulching of stable manure in the autumn.

The following four varieties will be found to cover their color range:

Perry's White. Creamy white, crimson center.

Goliath. The largest; rich scarlet flowers.

Mrs. Perry. Salmon-rose.

Princess Victoria Louise. Beautiful rose-colored flowers; very free.

Phlox decussata • Garden Phlox

These are the tall-growing, late-flowering Phloxes, which are the glory of the garden from July to October. They have been greatly improved of recent years, and now carry their great heads of many-colored flowers on stout stems from 1½ to 3 feet high. The flowers are in every imaginable shade of scarlet, crimson, shell-pink, lilac, dark violet and white. In a good many cases the flower color is set off by a striking eye of quite a distinct shade. The different varieties of *Phlox decussata* may be increased readily by means of cuttings or divisions of the rootstocks. Plants raised from cuttings inserted in autumn will, if planted out-of-doors in spring, give flowers the same year.

Old plants should be lifted every two or three years, and portions from the outside edge of the clump replanted afresh in ground that has been well tilled and manured heavily. Beds which have not been disturbed are all the better for having a dressing of well-decayed manure forked lightly into the soil. When a growth of 4 to 5 inches has been made in spring, it is well to thin the shoots out, leaving from five to seven leads to develop. These should be staked to prevent breaking over by strong winds. Apply a mulch after a heavy rain, and in dry weather water copiously. If, as is

PHLOX DECUSSATA, con.

sometimes the case, in warm, moist seasons, Phloxes are attacked by mildew, sprinkle a dressing of powdered sulphur on the leaves, and this will check the fungus.

The following comprise the best in each color:

Africa. Rich, royal purple.

America. One of the most free-flowering pinks.

Asia. Rich shade of mauve.

Crepuscle. Pearl-gray, suffused mauve, bright crimson center.

Elizabeth Campbell. Salmon-pink.

Europa. White, carmine eye.

Goliath. Bright cerise with deep eye.

Iris. Deep reddish violet.

W. C. Egan. Pale lilac, with an intense solferino-red eye.

Of the early-flowering Phloxes, *Phlox suffruticosa*, Miss Lingard, a grand white variety, which begins to bloom in June and goes

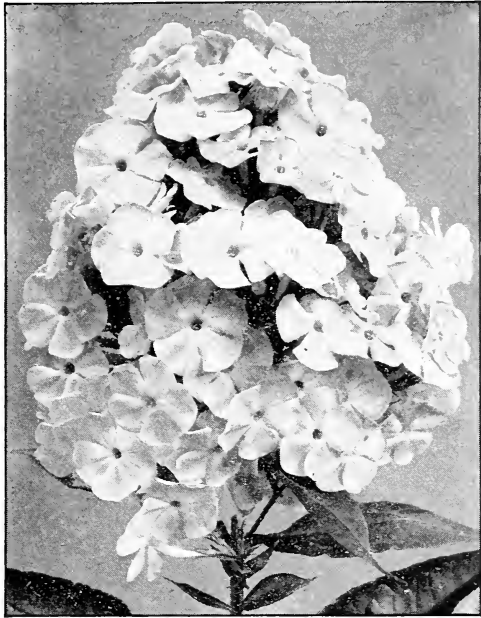
on without cessation until late autumn, should be in every garden. Other varieties of *Phlox suffruticosa* which are of great beauty are the following:

Fantasy. Rosy mauve.

Indian Chief. Very dark purple.

Mrs. Greenlees. Pure white, with rosy center.

The *Phlox suffruticosa* differ from the others in that the foliage and stem are deep green and glossy, and they begin to blossom in June and remain in bloom until October.



Hardy Phlox



Planting of Hardy Phlox

Pyrethrum

This lovely class of plants is probably the best of all the hardy perennials for general decoration of the flower-garden and for cut-flower purposes. They have an extensive color range, are most beautifully formed, resembling, more than anything else, a good chrysanthemum, are produced in great profusion, last longer than most other cut-flowers and, considering that June is their main blooming season, they are particularly useful. They have very graceful, green, fern-like foliage.

Pyrethrums do fairly well in any ordinary garden soil or situation, but to grow them to perfection they must have heavily manured and well-prepared soil. It is of great assistance to mulch them in early summer, and give water in dry weather. Rapid strides are being made in the improvement of these flowers, and it is very desirable that good named varieties be secured. These are just as easily grown as cheap seedlings, cost very little more, and are a continual source of pleasure to the grower. As the flowers fade, cut the old



Pyrethrums



Rudbeckia Newmanni

stems off and a fair crop of bloom may be had in the autumn. The following will be found a good half-dozen to grow; all are double.

La Belle Blonde. Pure white.

Lady Derby. Silvery flesh.

Lord Roseberry. Rich crimson.

Mme. Patti. Silvery rose.

Queen Mary. Bright peach-pink.

Solfatare. Creamy yellow.

Romneya Coulteri

The California Tree Poppy is an exquisite plant when it is cultivated well, and is worth taking pains with to grow it to perfection. It thrives best in a warm, sheltered position and is hardy as far north as Philadelphia. The shoots should be cut down to the ground before very cold weather sets in, and the plants given a good mulch of manure. This will serve a twofold purpose, acting both as a protection for the plants and as extra root-food, thus insuring heavy wood that will flower the next year over a lengthy period. It will require an abundance of water during lengthy spells of dry weather. Grows 6 feet high, and has often as many as a dozen or more fully developed flowers on a stem at one time. The flowers are white, 6 inches in diameter and last for several days; they are delightfully fragrant.

Rudbeckia • Coneflower

One of the most popular of our hardy garden perennials, the Rudbeckias provide a wealth of flowers from June to October. They are most attractive either for the mixed border or for massing. Of the easiest culture, perfectly hardy and very free-flowering, and much valued for cutting.

Golden Glow is a well-known variety, strong and vigorous, reaching a height of from 5 to 6 feet, with beautiful, double, golden yellow flowers in great profusion.

Newmani. Fine, rich orange-yellow, with a deep purplish black cone. For massing this is superb. 3 feet.

Purpurea, Morgenröthe. A new variety, the same as Purpurea, except in color, which is bright rose-pink.

Purpurea (Giant Purple Coneflower). The flowers of this variety are of a reddish purple, with a large, brown, cone-shaped disk in the center. They last in perfect condition on the plant for three or four weeks after they are fully developed. Blooms from July to September; height 3 feet. These are best if lifted and divided and a few of the strongest of the young growth replanted to provide for the following season's display.



Rudbeckia, Golden Glow

Salvia • Meadow Sage

It would be difficult to overestimate the value of these plants in the perennial garden, and the improvements which have of late years been made in them make it almost compulsory to employ them in any general scheme of planting. They can be had in bloom from June until cut by severe frost, and range in color from the pretty sky-blue of *Azurea* to the dense blue of *Virgata nemorosa*. They revel in a good, rich soil, and take all the sunshine they can get. The taller-growing varieties should be planted in clumps and kept carefully staked and tied until they attain their full height. All are hardy, but the precautionary covering of a few leaves during severe weather will insure perfect safety. The following varieties will be found especially serviceable:

Azurea. Grows 3 to 4 feet high, with a profusion of pale blue flowers during August and September.

Pitcheri. Grows 3 to 4 feet high; similar to the above in form, but with clear bright blue flowers.

Uliginosa. Grows 5 feet. This is a gem of recent introduction and certainly one of the best perennial novelties of recent years; its flowers are borne on long, lateral shoots; they are of a pretty cornflower-blue, with a distinct white eye, and are produced in abundance from the middle of June until late November. A splendid subject for the back of the border. **Virgata nemorosa** is much more dwarf than any of the preceding, growing from 15 to 18 inches high. The plant is very symmetrical and is literally covered with short spikes of rich, dark blue flowers, from July to September.

Greggii is entirely distinct and forms a bush 2 feet high, of a shrubby character. Its bright crimson-scarlet flowers are very attractive from June to November. Protection during very severe weather is necessary.

Sclarea has very thick silvery foliage and odd-looking flowers which make it very ornamental.

Senecio Clivorum

This is a really splendid subject for planting in swampy places by the side of a stream or in the wild garden. Its showy, golden yellow flowers are borne on long stems and stand well above the heavy, bold foliage. The foliage alone, giving no consideration to the flower-spikes, is strikingly beautiful. It is a strong-rooting subject and will thrive almost anywhere, so long as the roots have an abundance of moisture. The flowers appear in July and it continues to bloom throughout August. This is a very effective plant when grown in masses.

Statice • Sea Lavender

A group of plants that are not so well known or so extensively grown as they should be. They form a most valuable class, being adapted to either the border or the rockery, and are of very easy culture, delighting in a loose, open soil. They bear large, spreading heads of flowers in loose panicles, are very useful when cut, and can be hung up and dried, lasting for several months when so treated.

Latifolia, with its purplish blue flowers, thrown 2 feet above its evergreen leaves, is one of the best. It blooms in midsummer, and should be given deep soil in a sunny place.

Eximia, with flowers of a pretty shade of rose-lilac, is very distinct and of good habit.

Tatarica, with bright ruby-red flowers in loose panicles, is also worthy of a place in any collection. It grows about 2 feet high, and has very beautiful tufted foliage. It blooms for a long period.

Thalictrum • Meadow Rue

These stately plants should be grown more, if it were only for their finely cut foliage, which much resembles the foliage of the coarser maidenhair ferns. They are excellent subjects, either for half shade or full sunshine, and thrive in any good soil. The dwarf varieties are very suitable for the rock-garden.



Perennial Border

Aquilegifolium is a remarkably handsome species, with Columbine-like foliage and heads of feathery, tassel-like flowers, sepals white, stamens purplish.

Adiantifolium, a beautiful variety, with foliage like the maidenhair fern and small white flowers, is unsurpassed for cutting.

Minus. This species and its varieties are highly esteemed for the pretty foliage, which, when cut and used, is almost equal to maidenhair fern in elegance and lightness. As border plants, and when used as edgings, these dwarf Meadow Rues are pretty and graceful. The flowers are yellowish, borne very profusely in light, airy panicles.

Dipterocarpum, rosy purple, with citron-yellow anthers, and **Orientele**, a pure white, are scarcer varieties, but very good.

Tritoma · Red-Hot-Poker Plant, or Torch Lily

Not so very many years ago, *Tritoma uvaria grandiflora*, the old-fashioned Red-Hot-Poker Plant, was a much-admired autumn-blooming perennial, and with its tall spikes, sometimes reaching a height of 5 feet and over, it certainly was a conspicuous specimen during the fall. Of recent years the type has been very much improved upon, and we now have in the variety **Pfitzeri** a sort that is continually in flower from July until November. This splendid variety has become exceedingly popular, and it is little wonder, as its spikes of rich orange-scarlet produce a splendid effect during its blooming period. These flowers are borne on stems 3 to 4 feet high, and are gorgeous subjects for decorative cut-flower work. They like a rich, moderately heavy loam in which to reach perfection. They require protection in severe weather, and perhaps the best plan is to lift about mid-November, pot up, plunge the pots to the rims in a coldframe, and give a sparse covering of leaves before putting the sashes on. Give them air at all times when the weather is suitable. While the variety mentioned is best for general purposes, **Tuckii**, red and yellow, early flowering; **Quartiniana**, very early, orange-red, changing to yellow, and **Tricolor**, a small-flowered sort, in which red and yellow and sulphur-white are combined, might be added to the collection by reason of their different colors.



Tritoma Pfitzeri

Trollius · Globe Flower

The Globe Flowers are charming plants for the front of the perennial border. They like a half-shady position best, but do fairly well in a sunny situation. Given a moderately light soil and plenty of moisture, they make a fine showing, with their buttercup-like orange and yellow flowers. They are at their best during May and June, and make a brilliant show amongst other perennials.



Effective planting of Perennials

Caucasicus (Orange Globe) is a fine, bold variety, with large, deep orange-colored flowers. It blooms profusely, and the flowers are borne on fairly long stems.

Europæus. Bright yellow, globular flowers. A very desirable variety, giving a touch of brilliant color to the garden.

Japonicus, Excelsior. A very distinct species, producing very deep orange-colored flowers of large size.

Veronica • Speedwell

These are among the prettiest and most useful of herbaceous plants, and bear almost exclusively blue flowers, of which there are none too many. The variety **Longifolia subsessilis**, flowering in July and August, is bound to come to the front more and more as its virtues become better known. It is the handsomest deep blue flower the perennial border can possess, attaining a height of 3 feet, when well established. Its flowers are produced on stout stems, in dense racemes, from the axils of the upper leaves. The heights given show the uses to which this plant can be put, the tall-growing sort making a valuable combination with such flowers as Foxgloves in the back of the border, while the others fit most appropriately mixed with other average-sized plants.

Incana, with its bright, silvery foliage and flowers of amethyst-blue, is one of the prettiest of the dwarfer varieties, rarely exceeding 12 inches in height.

Spicata grows about 18 inches high, and bears long spikes of blue flowers.

Spicata alba is similar to the above, but with white flowers.

Virginica, with its pale blue flowers, is also well worth growing.

A covering of straw litter late in the autumn will be found a suitable and adequate winter protection.



Veronica spicata

Viola cornuta • Tufted Pansies

While the pansy itself is to all intents and purposes only a spring flower, the *Viola*, if given proper treatment, will continue to flower during the entire summer. These plants really ought to be used a great deal more than they are. It is essentially an amateur's flower, requiring little space, as it may be used as an edging for beds and borders. In their pleasing perfume they are interesting, while for cutting they can be made more delightful and attractive than most people suppose; for arranged in low, flat bowls over moss or in sand, they are very gay and last quite a long time.

The old blossoms and seed-pods should be rigorously picked off in order to prolong their flowering. Any neglect in this respect will soon cause a cessation of flowering and the plants will have a starved appearance. On dry, sandy soils they are inclined to exhaust

themselves, and should have a top-dressing of spent hops or sifted leaf-mold. This should be applied in dull weather, if possible, and will assist very much in keeping them in good health, and will also increase the size of the flowers.

During dry weather give plenty of water, especially on hot, sandy soil. They delight in a soil that is at once rich and cool, and partial shade during the hottest part of the day. They are exceedingly well adapted to planting as a ground-work under the roses in a rose-bed or border, the shade of the rose foliage being just what they require. They can be had in blue and purple, white and yellow. **G. Wermig** is a variety that will appeal to all, being a cross between a *Viola* and a sweet scented violet, with all the characteristics of the violet where color, form and length of stem are concerned, and possessing the low-growing, deep green, tufted foliage of the *Viola*. A solid bed of them presents a most welcome sight in midsummer.

A Few Border Plants for Shade

Need is often felt for perennials which will grow on the shady side of the house or fence, and the following are specially adapted to such places.

Acanthus · Bear's Breech

Acanthus mollis, 3 to 4 feet, is a fine foliage plant; the long, deeply dentated, heart-shaped leaves, drooping outward, are productive of a splendid effect. They can be used in the shady border, on the lawn, or in groups with other plants for sub-tropical effect. The flower spikes are from 2 to 3 feet long, purple and white. This is probably the plant which the Greeks used as the model for the beautiful scrollwork of *Acanthus* leaves seen in some of the finest Corinthian architecture.

Aconitum · Monkshood

Aconitum Napellus is a native of Britain, and grows to a height of from 5 to 6 feet. When planted in masses, it presents a striking appearance, its magnificent, erect-growing spikes of indigo-blue being a feature in the shady border during August and September.

The only white-flowered *Aconitum* is *Napellus albus*, which is similar in form to the above.

Wilsonii is a recent introduction from China, and attains a height of 6 feet. In color it is violet-blue. It commences to bloom in September, at a time when flowers of this color are scarce, and continues in bloom for a long time, by means of its lateral shoots.

Fischeri has large flowers of a lovely shade of bluish lilac, and during its season, from August to October, there are few border plants more delightful. Height 2 to 3 feet.

Antirrhinum

Snapdragon

During the last half-dozen years all sections of these plants have been improved almost beyond recognition, until at the present time they are possibly one of the most popular border decorative plants in commerce. Of their value for various color schemes there cannot now be much doubt. It is not so many years since the choice of colors in Snapdragons was very restricted, indeed. A radical change has gradually taken place, especially in the tall and the intermediate sections, until now we can have a wide color-range embracing, in the tall or Giant class, salmon-pink, silver-pink, pink, scarlet, striped white and yellow; another in this class that will prove popular is *Venus*, a beautiful new shell-pink, with white throat. In the intermediate, or semi-dwarf section, the colors at present are pink, scarlet, yellow and white, and others will soon be forthcoming in both this and the dwarf or Tom Thumb class. The latter class is especially suited for carpet or ribbon effects.



Antirrhinum (Snapdragon)

ANTIRRHINUM, continued

Although really what might be termed half-hardy perennials, they may be sown in early February indoors, and used as annuals. Seed should be sown in trays of light, finely sifted soil. As the seed is very small, it is advisable to soak the soil in the trays before sowing, as by watering overhead the seed is apt to be washed down the side of the trays. Cover with a sheet of glass to prevent evaporation, and keep in a temperature of from 50 to 55 degrees. The seedlings should make their appearance in ten days, and when they have made a pair of leaves beyond their seed leaves they should be pricked off into other trays at a distance of 2 inches apart. The soil this time need not be so fine as in the seed-boxes. When well established, remove to a coldframe and protect from late spring frosts. The main object then will be to keep them in as sturdy a condition as possible. Remove the sash on warm days, and even a chink of air at nights will be beneficial. The ground for their reception should be well dug and manured.

Antirrhinums are most effective grown in masses, and even in hardy borders they ought to be planted in as large clumps as possible. A bed of the Giant Antirrhinums, with the medium and dwarf sorts used as a ground-work, makes a brave show, especially if the color combinations be carefully thought out. As the tall kinds will reach a height of from 3 to 4 feet when well grown, it will be necessary to stake them to prevent them being blown about. Each plant should have one stake, and the main spike be tied neatly to it. The side growths, or laterals, can then be laced up lightly.

Antirrhinums make excellent cut-flowers, lasting a long time in water. Cut the flowers off as soon as they fade, and keep the ground well cultivated. A good supply of water during dry periods will be highly beneficial. For a batch to flower in early summer, seed can be sown in September and the plants wintered over in pots, ready to plant when danger of severe frost is past, in early April.

Astilbe

The Astilbes are of great importance among the hardy plants. They require a partially shaded position in the border, where they are protected from the sun during the hottest part of the day. They succeed best in a rather heavy, rich soil, and will not stand long unless provided with plenty of moisture. They are excellent subjects for waterside planting.

Davidii has elegant tufted leaves, which are of a bronze-color when young, and sheaves of rich violet-crimson flowers, very freely produced during July and August. Growing from 5 to 6 feet high, this makes an excellent showing in the back row of a border.

Grandis is a Chinese species, somewhat similar to *Davidii*, but if anything more vigorous; has immense panicles of white flowers, 2 to 2½ feet long, and grows fully 6 feet high. The large pinnate leaves are 2 feet long.

A new type has been obtained by crossing *Davidii* with the common herbaceous *Spireas*; these are of vigorous growth and produce many long, graceful panicles of flowers ranging in color from white to a deep violet-rose. **Venus**, violet-rose; **Ceres**, pale rose; **Salmon Queen** and **White Plumed** are the best of these. They require the same location and treatment as the older and better-known varieties.

Campanula • Bellflower

Several of the varieties not mentioned in the notes devoted to Campanulas for the open or sunny border, are excellent subjects for the shady border, and, with their bright blue or white bells, will be very handsome additions to it. They grow vigorously and soon develop into lusty specimens.

Alliariaefolia, 2 feet, has graceful spikes of nodding, white flowers borne very profusely during July.

Latifolia, 3 feet, is a mass of large, purplish blue flowers during May and June. It is a rapid and vigorous grower.

Trachelium (Coventry Bells), with its purple flowers during June and July, completes a trio well worthy a place in any planting scheme.

Dielytra, or Dicentra

No plant is better known, nor is there another popular favorite to equal the old-fashioned Bleeding Heart (*Dielytra spectabilis*), so called from its drooping, heart-shaped flowers. Its adaptability is one of its chief assets. It is especially suited for planting in shade or semi-shade, and will do well in almost any kind of soil. The flowers begin to appear in May, and during a period of six weeks it is simply a mass of heart-shaped shell-pink flowers which are borne in graceful sprays on fleshy stems. It grows about 2½ feet high, and is fine in front of shrubbery.

Formosa is a dwarf-growing variety and has a much longer flowering season than the former; rising from its finely lacinated foliage are beautiful pink flowers on stems 18 inches high. These continue to grace the border from April to August.



Dielytra spectabilis (Bleeding Heart)

Epimedium

These are exceedingly pretty, dwarf plants with very ornamental foliage, and are particularly suited for shady or half-shady situations, for the front of borders or for edgings, rarely exceeding a height of 10 to 12 inches. A few of the best are **Alpinum**, crimson and yellow; **Niveum**, pure white; **Coccineum**, crimson; **Sulphureum**, yellow; **Violacea**, violet. They succeed in any soil.

Hardy Ferns

There is scarcely a garden but has a place for a colony of Hardy Ferns. They will grow and flourish where grass will not grow—under trees, in partial or dense shade. They are so easily grown that everyone may have them. If you wish to enliven a dark corner where flowers will not thrive, try a few Ferns, and the change will be most manifest. To those who already have a planting of Hardy Ferns, a few words as to their treatment may be acceptable.

After the long rest from autumn till the spring, the Hardy Ferns begin to resume activity early in April, and if those which are planted in sheltered nooks are examined closely, the crowns will be found to have started swelling. This is enough to tell the intelligent gardener that the best time in the year has arrived for dividing, transplanting and doing any rearranging which his fernery may require. If this is done at the proper time, there is no risk whatever of doing the young fronds any injury, or in any way checking or stunting the growth, for after the long dormant season there is such a wealth of energy stored away that a vigorous, rapid growth is immediately assured, and the new roots which are forming will get a grip of the soil in good time for the coming summer. They also get the benefit of the showery weather and the dewy mornings and evenings usually experienced at this time of the year, while if the planting be left until the plants have started into growth and the earlier fronds are half developed, they lose these advantages and have to battle against a higher temperature and generally drier weather.

These Ferns are divided into two classes, which might be termed Deciduous and Evergreen. The former lose their fronds in winter and the latter retain them.

Of the evergreen species, **Polypodium vulgare** is a gem for rockwork planting;



Planting of Hardy Ferns

HARDY FERNS, continued

the *Scolopendriums*, or Hart's Tongue Ferns have to be seen to be appreciated; the *Blechnums*, the *Polystichums* (Lace or Shield Ferns), and the *Lastrea Filix-mas* (Male Fern) are the very best.

In the deciduous class we find *Adiantum pedatum*, the native hardy Maidenhair; the *Aspidiums*, or Wood Ferns; the *Aspleniums*, or Lady Ferns; most of the *Lastreas*, or Buckler Ferns; *Cystopteris*, or Bladder Fern, and a few of the *Polypodiums*.

All the deciduous class, when growing in their native wildness, are protected during the winter by their dead frondage, and if for the sake of appearance this is cleared away, a substitute will have to be provided. This, in the form of a mulching of old leaves, would be as good a protection as any. As to the evergreen species, it is not a wise plan to denude them of their fronds, for, apart from the shelter these give the crowns there can be no doubt that they play an important part in the development of roots and fronds for the succeeding season. An examination in spring will reveal to us that many of the plants which, when first planted, had only a single crown, have now developed several lateral crowns. It is best to lift these plants early and separate them, leaving only the one strong crown; if this is not done it will resolve itself into the survival of the fittest, and a consequent and continuous diminution in size.

The Ferns with creeping rootstocks, such as the *Polypodium*, are easily propagated if a piece of this rootstock, which has a frond or two and a strong growing eye, be taken off the parent plant and inserted in a good, open compost. It will not be long in taking a root-hold. Hardy Ferns should be planted with their crowns level with the surface of the soil, and where it is possible, a good loam into which has been incorporated an ample dressing of decayed leaves will be found to suit their requirements best.

Orobis • Bitter Vetch

Plants doing equally well either in sun or shade, and excellent for the perennial border or rockery. Closely allied to *Lathyrus*, having attractive, pea-shaped flowers.

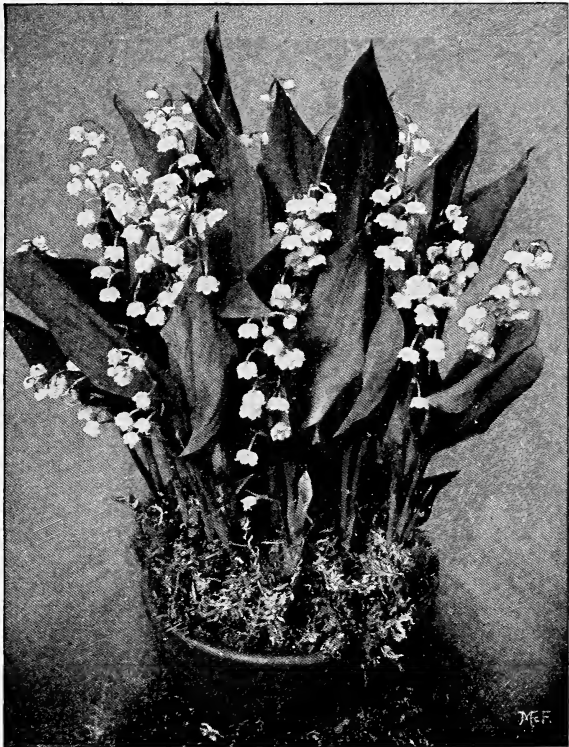
Lathyroides, 1 foot, flowering in May and June, is a very shapely plant, with numerous spikes of blue flowers; 2 feet high.

Superbus is a very desirable dwarf species, with rosy crimson flowers, borne freely on branching stems in spring.

Vernus is one of the most delightful of spring and early-summer flowering plants, forming a compact bush of pinnate foliage and bright purple-and-blue flowers.

Lily-of-the-Valley

This sweetly pretty, ever popular and fragrant flower does not always get the situation in the garden that it deserves. It does very well in a sheltered, shady border under a wall, and the flower-spikes last a good deal longer if they are not subjected to the full rays of the noonday sun, but to consider it as a plant for shade, and shade alone, is all nonsense. Many people buy clumps and plant them in any corner, in any soil, leaving them to take care of themselves. Where the soil is right,—rich, mellow, open, well drained,—results are good; but when they get into a heavy, cold corner of the garden where the sun never penetrates, they merely exist for a time, the crowns gradually diminish in size, and by degrees they die out altogether. Nothing in the plant line will respond more quickly to generous treatment than Lily-of-the-Valley. If the soil be heavy, work in a good dressing of stable manure and a sufficiency of ground oyster-shell to open it up, and when the foliage has died down after flowering, give a good mulching of well-decayed manure. Plant strong clumps 15 to 18 inches apart; they spread rapidly, and will produce a profusion of flowers for cutting in the spring.



Lily-of-the-Valley

Pachysandra terminalis

As a dwarf-growing plant for under cover, nothing approaches this. Its creeping habit, never exceeding 6 to 8 inches high, and its vigorous, spreading growth, make it practically indispensable. When established, it forms a perfect mat of bright, glossy green foliage, which retains its color in the severest winters. It makes a capital covering if planted under rhododendrons or other flowering shrubs, or as an edging for the shrubbery border. Its small spikes of flowers, produced in May, can be disregarded when estimating the value of this evergreen, shrubby perennial.

Hardy Primulas

These modest, unassuming hardy plants, which might well be termed harbingers of spring, do not receive half the attention they deserve. Hybridizers and collectors have, of late years, been giving us so many varieties of special merit that, sooner or later, they are bound to become better known than they are at present. One can get such a varying wealth of color in them, and such a multiplicity of species and varieties, that they are a study in themselves.

HARDY PRIMULAS, continued

They require a rich soil that is well drained, and prefer a semi-shady position, while most of them are the better for a slight protection of dry leaves in the winter months. It would require too much space to enumerate and describe one-tenth of the varieties now in commerce, but a small selection of the most easily managed can be made to



Primula veris superba

cover a wide area of color, and will be found both interesting and beautiful. They should, when planted in the border, be afforded a growing space of 8 inches.

Elatior (*Polyanthus*) can be had in a great assortment of colors; its thick, fleshy stems are surrounded by large clusters of twenty to thirty flowers.

Veris superba is identical with the above in form and habit, but has immense heads of golden yellow flowers.

Vulgaris alba plena is a double, white form of *Vulgaris*.

Vulgaris Croussii plena is a double violet-purple.

Vulgaris cœrulea is a single, bright blue; large and free.

Vulgaris (English Primrose) is the best known, is very fragrant, its canary-yellow flowers rising singly on stems from beautiful tufts of heavy green leaves.

Denticulata is a fine, vigorous Himalayan species, with round heads of bright lilac flowers. It is a splen-

did subject for pot culture, but does best when planted in positions where it can obtain a generous supply of water without being actually in it. A rich soil and good drainage is a necessity; any stagnation is detrimental. *Denticulata alba* is a beautiful white form of the type.

Denticulata Cashmeriana has heads of light purple flowers with yellow centers, on stout stems. The flowers, stems and under side of the leaves are covered with a mealy powder resembling gold dust.

Sieboldii (New Chinese Primula). These have been immensely improved in recent years, and now run through all imaginable shades of the delicate colors; soft pink, cool lavender and white are the directions in which they run, and in no case is the color anything but beautiful. All these are perfectly hardy, and do best in a half-shady position.

Pulmonaria • Lungwort

The Lungworts (so called because of their supposed properties for the cure of lung diseases) are splendid plants for planting in shade under trees.

Saccharata maculata is a very handsome species, with marbled foliage; the beautifully blotched leaves are quite as decorative as many of the hothouse decorative plants. The flowers, although turning bluish with age, still retain a larger proportion of rosy pink than most species. Most interesting plant for the front of the shady border.

Officinalis rubra has spikes of purplish red flowers 1 foot high. Both varieties flower during the months of May and June.

Arvernense, with its compact tufts of narrow, deep green leaves and numerous spikes of deep blue flowers, is deserving of a place on the rockery, as it is one of the finest dwarf, spring-flowering border plants.

Ranunculus • Buttercup

Aconitifolius flore-pleno (Fair Maids of France), 2 feet, produces myriads of the prettiest double, white flowers on compact, branching stems; each flower is like a tiny, double, white dahlia. This is an invaluable plant for the shady border and is excellent for cutting.

Acris flore-pleno (Yellow Bachelor's Button), 2 feet, is a pretty combination for the above variety. Its bright golden yellow flowers are borne on slender stems. They are also fine for cutting, the double flowers lasting a long time. They are produced in spring and early summer, and again in the fall.

Asiaticus is the wild Buttercup of Palestine. It is quite distinct from any other, as its flowers are of the most splendid scarlet. It is said that no more glorious sight can be imagined than the fields of the Holy Land when this plant is in full flower. It is the parent of the French, Persian and Turban *Ranunculus* offered in the bulb catalogues, but the single form has a distinct beauty of its own which surpasses these others. They do well in any good garden soil, but require a moist situation and a little protection in winter.

Rodgersia

Rodgersia podophylla (Bronze Leaf), when well grown, with its large, bronzy, palmate leaves and creamy white, *Astilbe*-like flowers, presents a striking, distinct and remarkable handsome appearance. It must have a good dressing of leaf-soil or peat incorporated with a rich loam and be planted in a moist and shady place, in order to get the best results from it. Frequently attains a height of 3 feet, and flowers in mid-summer.

Shortia • Crimson Leaf

Possessing flowers of rare delicacy and exquisite beauty, and foliage the coloring of which during autumn, winter and spring is unsurpassed, **Shortia galacifolia** is one of those plants which, when seen at its best, cannot fail to attract attention. Tufts of leaves of a deep, glossy green, become tinted and blotched in the autumn with crimson and bronze, and splashes of white. The beauty of these old leaves remains all winter, and in spring the plant takes on another type of brilliant distinctiveness. On its rosy red stems are produced creamy white flowers with pretty fringed petals, changing as they age to a charming rosy tint. These keep on appearing for several weeks, and the blending of autumn tints with the ruddy stems and spring flowers is a very exquisite combination. A half-shady position is the best for this plant, with a soil composed of sandy loam and leaf-soil, cool and moist, but not too wet.

Spigelia Marilandica • Worm Grass

This handsome, native plant succeeds, and is seen at its best, in moist, shady situations. It produces during the summer and autumn months bright cherry-red, tubular flowers, with yellow throats. It attains a height of 18 inches, and will be found a valuable addition to existing collections.

Spiræa • Meadow Sweet; Goat's Beard

These are very graceful plants, both in flower and foliage. Their beautiful, wavy plumes of pretty blossoms, and the finely cut foliage, combined with their compact form of growth, make them among the most desirable species for the shady border. They love a good rich soil, well cultivated, and a rather moist situation. Many of the varieties make excellent pot-plants. A representative half-dozen are:

Aruncus. A lovely variety, producing its long, feathery panicles of innumerable small, white flowers on stems 3 to 5 feet long, during June and July.

Filipendula flore-pleno (Double-flowered Dropwort) has very pretty, fern-like foliage and numerous corymbs of double, white flowers on stems 12 inches long; June and July is the flowering period.



Spiræa Aruncus

SPIRÆA, continued

Palmata is one of the most sweetly pretty of border plants; its lovely plumes of crimson-purple flowers are produced freely on its red stems and branches, which rise to a height of 3 feet.

Venusta magnifica is a comparatively new variety and a great advance on the old favorite, *Venusta*. Its fragrant, rosy red flowers are of a much brighter color, and it is a more vigorous grower, attaining, when established, a height of 5 feet.

Kamtschatica. This is a strong, erect grower. It has immense heads of white flowers during July and August, reaching a height of 6 feet.

Ulmaria flore-pleno (Meadow Sweet). This old variety continues to hold its own. It has compact heads of double, white flowers during June and July, making a bold show in the garden. 3 feet.

Tradescantia • Spiderwort

These useful border plants do well either in sun or half shade, with numerous, erect stems bearing in the axils of the leaves and in terminal heads loose clusters of three-petaled flowers. The leaves are long, narrow and gracefully drooping, and although the flowers are short-lived, they are produced in such plentiful profusion that from early summer till well on in the autumn there is a constant supply. They are of easy culture, and can be grown in almost any garden soil. The following are the best.

Virginica. Purplish lilac.

Virginica alba. A white form.

Violacea. Violet-colored flowers.





Siberian Iris

BORDER PLANTS MOST SUITABLE FOR CUT-FLOWERS

- | | |
|---|---------------------------------|
| Achillea Ptarmica, The Pearl. | Heucheras, all varieties. |
| Anemone Japonica and varieties. | Iris, Japanese. |
| Aquilegia hybrida. | Iris, German. |
| Aster, Hardy (Michaelmas Daisy) | Iris Sibirica. |
| Campanula persicifolia. | Lupinus polyphyllus. |
| Chrysanthemum uliginosum | Peonies. |
| Chrysanthemum leucanthemum (Shasta Daisy). | Poppies, Iceland. |
| Chrysanthemum, Hardy Pompon and | Poppies, Oriental. |
| Early-flowering English varieties. | Phlox decussata. |
| Coreopsis grandiflora. | Pyrethrum hybridum. |
| Echinops (Globe Thistle). | Rudbeckia. |
| Eryngium (Sea Holly). | Scabiosa. |
| Erigeron speciosus. | Spiræa Aruncus. |
| Gaillardia grandiflora. | Spiræa filipendula flore-pleno. |
| Gypsophila paniculata, single and double varieties. | Statice latifolia. |
| Heleniums. | Thalictrum. |
| Helianthus. | Tritoma (Red-Hot-Poker Plant). |
| | Trollius (Globe Flower). |
| | Veronica. |

A FEW BORDER PLANTS FOR SHADE UNDER TREES

Acanthus mollis.
 Aconitum Napellus and varieties.
 Anemone sylvestris.
 Astilbe, in varieties.
 Campanula alliariaefolia.
 Campanula latifolia.
 Campanula Trachelium.
 Dielytra formosa.
 Digitalis.
 Doronicum.
 Epimedium.
 Funkias, various.
 Ferns, Hardy.
 Geum coccineum.
 Helianthus rigidus.
 Helleborus niger.

Hemerocallis aurantiaca.
 Hemerocallis flava.
 Iris Germanica, varieties.
 Mertensia.
 Oenothera.
 Podophyllum peltatum.
 Polemonium coeruleum.
 Polygonatum multiflorum.
 Ranunculus aconitifolius.
 Rodgersia podophylla.
 Spiræas, in variety.
 Thalictrum.
 Tradescantia.
 Trollius (Globe Flower).
 Veronica gentianoides.

USEFUL ROCKERY PLANTS

Achillea tomentosa.
 Alyssum saxatile compactum.
 Anemone Hepatica.
 Aquilegia (Columbine)
 Arabis alpina.
 Aubrietia, in variety.
 Campanula Carpatica.
 Campanula, White Star.
 Cerastium tomentosum.
 Clematis recta.
 Dodecatheon media.
 Dianthus deltoides.
 Erinus alpinus.
 Geranium sanguineum.
 Gypsophila cerastoides.
 Gypsophila repens.
 Hardy Ferns.
 Houstonia serpyllifolia.
 Helianthemum, Sun Rose.
 Heuchera sanguinea.

Hieraceum villosum.
 Iris pumila.
 Linum flavum.
 Lithospermum prostratum.
 Lithospermum, Heavenly Blue
 Lysimachia nummularia.
 Nierembergia rivularis.
 Omphalodes verna.
 Primulas.
 Potentilla.
 Plumbago Larpentæ.
 Ranunculus Asiaticus.
 Saponaria ocymoides.
 Saxifraga, in variety.
 Sedum (Stonecrop).
 Thymus Serpyllum.
 Trillium grandiflorum.
 Tunica saxifraga.
 Veronica pectinata.
 Viola pedata.



General List of Border Plants for Sunny Positions

Name	Height	Color of Flowers	Season of Bloom
Acanthus mollis latifolius.....	3 ft.	Ornamental foliage.	Aug. to Sept.
Achillea Eupatorium.....	4 to 5 ft.	Yellow	July to Oct.
lilipendulina.....	2 ft.	Yellow	July
Millefolium roseum.....	1½ ft.	Pink	June to Oct.
The Pearl.....	2 ft.	White	June to Oct.
Adonis Amurensis.....	1 ft.	Yellow	April
Amurensis flore-pleno.....	1 ft.	Yellow	April
Ætheopappus pulcherrimus.....	2½ ft.	Rose	July
Agrostemma coronaria.....	3 ft.	Rosy crimson	June and July
Anchusa Italica and varieties.....	4 ft.	Blue	May to July
myosotidiflora.....	1 ft.	Blue	April and May
Anemone Japonica alba.....	2 to 3 ft.	White	July to Nov.
Japonica, Alice.....	2 to 3 ft.	Rose	July to Nov.
Japonica, Coupe d'Argent.....	2 to 3 ft.	Pure white; double	July to Nov.
Japonica, Enchantment.....	2 to 3 ft.	Semi-double; white, pink reverse	July to Nov.
Japonica, Geante Blanche.....	2 to 3 ft.	White	July to Nov.
Japonica, Kriemhilde.....	2 to 3 ft.	Semi-double; pink	July to Nov.
Japonica, Loreley.....	2 to 3 ft.	Semi-double; mauve	July to Nov.
Japonica, Prince Henry.....	2 to 3 ft.	Double; pink	July to Nov.
Japonica, Queen Charlotte.....	2 to 3 ft.	Pink	July to Nov.
Japonica rosea superba.....	2 to 3 ft.	Silvery rose	July to Nov.
Japonica, Whirlwind.....	2 to 3 ft.	Semi-double; white	July to Nov.
Aquilegias in variety.....	2 to 4 ft.	Various colors	May to July
Artemisia lactiflora.....	4 ft.	White	Aug. and Sept.
Asclepias tuberosa.....	2 ft.	Orange	July and Aug.
Asters (Michaelmas Daisies).....	1 to 6 ft.	White and shades of blue	Sept. and Oct.
Baptisia australis.....	2 ft.	Dark blue	June and July
Boltonia asteroides.....	6 ft.	White	July to Oct.
latisquama.....	5 ft.	Pink	July to Oct.
latisquama nana.....	2 ft.	Pink	July to Oct.
Campanula glomerata.....	1½ ft.	Blue	June to Aug.
Medium (Canterbury Bells).....	3 ft.	White, pink and blue	June and July
persicifolia.....	2 ft.	White and blue	June and July
persicifolia Mørheimi.....	3 ft.	Double; white	May to July
pyramidalis.....	4 to 6 ft.	White and blue	July and Aug.
Caryopteris Mastacanthus.....	3 ft.	Blue	Sept. to Nov.
Centaurea	2 to 3 ft.	Various colors	July to Sept.
Chrysanthemum , Hardy Pompon.....	1½ to 3 ft.	Various colors	Oct. to Nov.
Hardy Large-flowering.....	2 to 3 ft.	Various colors	Aug. to Nov.
leucanthemum.....	2 ft.	White	Sept. to Nov.
Clematis recta.....	3 ft.	White	Aug. to Sept.
recta flore-pleno.....	3 ft.	White; double	Aug. to Sept.
Coreopsis lanceolata.....	2 to 3 ft.	Yellow	June to Sept.
Delphiniums , Various.....	2 to 5 ft.	Blue	June to Oct.
Mørheimi.....	3 ft.	White	June to Oct.
Dictamnus (Gas Plant).....	2½ ft.	White and pink	June and July
Digitalis (Foxglove).....	5 ft.	Various colors	June and July
Eryngium (Sea Holly).....	2 to 3 ft.	Blue	July to Sept.
Eupatorium ageratoides.....	3 to 4 ft.	White	Aug. and Sept.
cœlestinum.....	1½ to 2 ft.	Blue	Aug. to Oct.
maculatum.....	2½ ft.	Reddish purple	Aug. to Oct.
Funkia , Various.....	1 to 2 ft.	White and lilac	July and Aug.

GENERAL LIST OF BORDER PLANTS FOR SUNNY POSITIONS, *con.*

Name	Height	Color of Flowers	Season of Bloom
<i>Gaillardia grandiflora</i>	2 ft.	Reddish brown	June to Oct.
<i>Geum coccineum</i>	1½ ft.	Scarlet	June to Oct.
Mrs. Bradshaw.....	1½ ft.	Double; scarlet	June to Oct.
<i>Gypsophila paniculata</i>	2 to 3 ft.	White	June to Aug.
<i>paniculata flore-pleno</i>	2 to 3 ft.	Double; white	July to Sept.
<i>Heleniums</i> , Various.....	2 to 5 ft.	Yellow shades	July to Oct.
<i>Helianthus</i> , Various.....	4 to 7 ft.	Yellow shades	July to Oct.
<i>Heliothis</i> , Various.....	3 ft.	Yellow	June to Oct.
<i>Hemerocallis</i> , Various.....	3 to 5 ft.	Yellow shades	May to July
<i>Hibiscus</i> (Mallows).....	4 to 8 ft.	Various colors	June to Oct.
<i>Hollyhocks</i> , Double, in separate colors.....	6 to 12 ft.	Various colors	July and Aug.
Allegheny.....	6 to 12 ft.	Mixed	July and Aug.
Single.....	6 to 12 ft.	Mixed	July and Aug.
<i>Iris Germanica</i>	1½ to 2 ft.	Various colors	May
<i>Kaempferi</i> (Japanese).....	3 ft.	Various colors	June and July
<i>intermedia</i> , or <i>interregna</i>	1½ ft.	Various colors	April and May
<i>pumila</i>	¾ to 1 ft.	Various colors	June
<i>Lavendula vera</i>	1½ ft.	Blue	July and Aug.
<i>Liatris pycnostachya</i>	5 ft.	Rosy purple	July to Sept.
<i>scariosa</i>	3 ft.	Purple	July to Sept.
<i>Lupinus polyphyllus</i>	3 ft.	Blue	May and June
<i>polyphyllus albus</i>	3 ft.	White	May and June
<i>polyphyllus Moerheimi</i>	3 ft.	Pink	May and June
<i>Lobelia cardinalis</i>	1½ to 2 ft.	Red	Aug. and Sept.
<i>syphilitica</i> , Hybrids.....	2 to 3 ft.	Mostly blue and white	July to Sept.
<i>Lythrum roseum superbum</i>	3 to 4 ft.	Rose	July to Sept.
<i>Lychnis Chalcedonica</i>	2 to 3 ft.	Orange-scarlet	June to Sept.
<i>Haageana</i>	1 ft.	Orange-scarlet	May and June
<i>vespertina</i> , Double.....	1½ ft.	White	June to Sept.
<i>Viscaria</i> , Double.....	1 ft.	Red	June
<i>Monarda didyma</i>	2 to 3 ft.	Scarlet	July and Aug.
<i>didyma rosea</i>	2 to 3 ft.	Rose-pink	July and Aug.
<i>didyma violacea</i>	2 to 3 ft.	Amaranth-red	July and Aug.
<i>fistulosa alba</i>	2 to 3 ft.	White	July and Aug.
<i>Oenothera</i> , Various.....	1 to 1½ ft.	Yellow	June to Sept.
<i>Pardanthus Sinensis</i>	2½ ft.	Orange	Aug. and Sept.
<i>Peonies</i> , Herbaceous.....	3 to 4 ft.	Various colors	June
Tree.....	3 to 4 ft.	Various colors	June
<i>Poppy</i> , Oriental, Goliath.....	2½ to 3 ft.	Scarlet	May and June
Oriental, Princess Victoria Louise.....	2½ to 3 ft.	Salmon-pink	May and June
Oriental, Mahoney.....	2½ to 3 ft.	Crimson-maroon	May and June
Oriental, Mrs. Perry.....	2½ to 3 ft.	Salmon-rose	May and June
Oriental, Trilby.....	2½ to 3 ft.	Red	May and June
Oriental, Parkmanni.....	2½ to 3 ft.	Crimson	May and June
<i>Pentstemon barbatus Torreyi</i>	3 to 4 ft.	Scarlet	June to Aug.
<i>digitalis</i>	2 to 3 ft.	Purplish white	June and July
<i>Phlox decussata</i> , Varieties.....	1½ to 3 ft.	Various colors	June to Oct.
<i>suffruticosa</i> , Miss Lingard.....	1½ to 3 ft.	White	May to Oct.
<i>suffruticosa</i> , Mrs. Dalrymple.....	1½ to 3 ft.	White, shaded rose	May to Oct.
<i>Physostegia Virginica</i>	3 to 5 ft.	Pink	June and July
<i>Virginica alba</i>	3 to 5 ft.	White	June and July
<i>Pinks</i> , Hardy Garden.....	1 ft.	Various colors	May and June
<i>Platycodon grandiflorum</i>	2 to 3 ft.	Blue	July and Aug.
<i>grandiflorum album</i>	2 to 3 ft.	White	July and Aug.

GENERAL LIST OF BORDER PLANTS FOR SUNNY POSITIONS, con.

Name	Height	Color of Flowers	Season of Bloom
<i>Rudbeckia</i> , Golden Glow.....	5 to 6 ft.	Double; yellow	July to Sept.
Maxima.....	5 to 6 ft.	Single; yellow	June to Sept.
Newmani.....	3 ft.	Single; yellow	July to Oct.
purpurea.....	3 ft.	Reddish purple	July to Oct.
purpurea, Morgenröthe.....	3 ft.	Bright rose-pink	July to Oct.
<i>Salvia</i> azurea.....	2 to 3 ft.	Blue	Aug. to Oct.
Greggii.....	2 ft.	Crimson-scarlet	June to Oct.
Pitcherii.....	3 to 4 ft.	Deep blue	Aug. to Oct.
uliginosa.....	5 ft.	Pale blue, white eye	June to Nov.
virgata nemorosa.....	2 ft.	Dark blue	June and July
<i>Scabiosa</i> Caucasica.....	1½ ft.	Lavender	June to Sept.
Caucasica alba.....	1½ ft.	White	June to Sept.
<i>Statice</i> latifolia.....	1½ ft.	Blue	June to Sept.
<i>Stokesia</i> cyanea.....	1½ to 2 ft.	Blue	June to Oct.
cyanea alba.....	1½ to 2 ft.	White	June to Oct.
Sweet William.....	2 ft.	Various colors	June.
<i>Valeriana</i> coccinea.....	2 ft.	Red	June to Oct.
coccinea alba.....	2 ft.	White	June to Oct.
officinalis.....	2 ft.	Rose	June and July
<i>Tritoma</i> Pfitzeri.....	3 to 4 ft.	Orange-scarlet	Aug. to Nov.
Tuckii.....	3 ft.	Red and yellow	Aug. to Nov.
Quartiniana.....	3 to 4 ft.	Orange-red	Aug. to Nov.
<i>Veronica</i> amethystinus.....	2 ft.	Blue	July and Aug.
incana.....	1 ft.	Blue	July and Aug.
longifolia subsessilis.....	3 ft.	Blue	July and Aug.
spicata.....	1½ ft.	Blue	June and July
spicata alba.....	1½ to 2 ft.	White	June and July

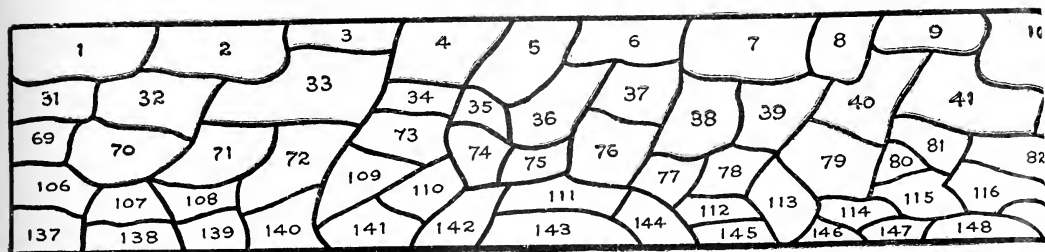
The foregoing is an abridged list; a detailed list of species and varieties will be found in our annual garden book.



Field of Herbaceous Peonies

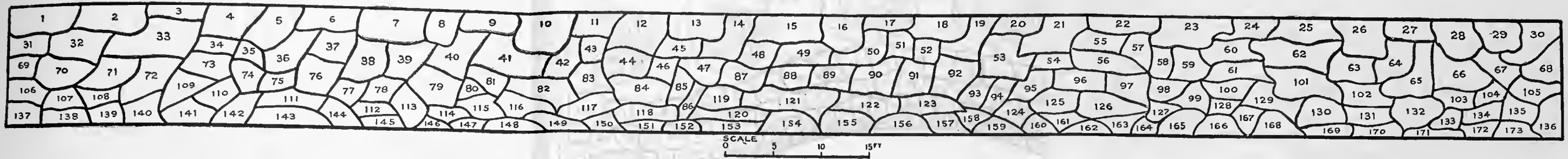
INDEX

	PAGE		PAGE
Acanthus.....	35	Lavender.....	23
Aconitum.....	35	Leopard's Bane.....	14
Ageratum, Perennial.....	14	Lilies.....	22, 23
Alkanet.....	8	Lily-of-the-Valley.....	39
Anchusa.....	8	Lobelia.....	24
Anemone.....	8	Lungwort.....	40
Antirrhinum.....	35, 36	Lupinus.....	24
Aquilegia.....	9	Lychnis.....	24, 25
Artemisia.....	9	Mallow.....	18
Arundo.....	16	Meadow Rue.....	32
Asters.....	10	Meadow Sage.....	31
Astilbe.....	36	Meadow Sweet.....	41, 42
Baby's Breath.....	15	Michaelmas Daisy.....	10
Bear's Breech.....	35	Monarda.....	25
Bellflower.....	36	Monkshood.....	35
Bergamot.....	25	Orobus.....	38
Bitter Vetch.....	38	Pachysandra.....	39
Blanket Flower.....	15	Pampas Grass.....	16
Bleeding Heart.....	37	Pansies, Tufted.....	34
Buttercup.....	41	Papaver.....	28
Campanula.....	11, 36	Peonies.....	26, 27
Christmas Rose.....	17	Phalaris.....	16
Chrysanthemum.....	11, 12	Phlox.....	28, 29
Columbine.....	9	Plantain Lily.....	14
Coneflower.....	31	Poppy.....	28
Crimson Leaf.....	41	Primula.....	39, 40
Cultural Directions.....	4-7	Pyrethrum.....	30
Cut-Flowers, Plants for.....	43	Pulmonaria.....	40
Day Lilies.....	17, 18	Ranunculus.....	41
Delphinium.....	12, 13	Red-Hot-Poker Plant.....	33
Dicentra.....	37	Rockery Plants.....	44
Dielytra.....	37	Rodgersia.....	41
Digitalis.....	13	Romneya.....	30
Doronicum.....	14	Rudbeckia.....	31
Elymus.....	16	Salvia.....	31
Epimedium.....	37	Sea Bugloss.....	8
Erianthus.....	16	Sea Holly.....	14
Eryngium.....	14	Sea Lavender.....	32
Eulalia.....	16	Senecio.....	32
Eupatorium.....	14	Shade, Plants for.....	35, 44
Ferns.....	37, 38	Shortia.....	41
Foxglove.....	13	Snapdragon.....	35, 36
Funkia.....	14	Sneezewort.....	16
Gaillardia.....	15	Soil.....	4
Gardener's Garter.....	16	Speedwell.....	34
Gauze Flower.....	15	Spigelia.....	41
Globe Flower.....	33	Spirea.....	41, 42
Goat's Beard.....	41, 42	Spiderwort.....	42
Grasses, Ornamental.....	16	Starwort.....	10
Gynerium.....	16	Statice.....	32
Gypsophila.....	15	Sunflower.....	17
Helenium.....	16	Sunny Positions, Plants for.....	45-47
Helianthus.....	17	Thalictrum.....	32
Heliopsis.....	17	Torch Lily.....	33
Helleborus.....	17	Tradescantia.....	42
Hemerocallis.....	17, 18	Tritoma.....	33
Hibiscus.....	18	Trollius.....	33
Hollyhock.....	19	Veronica.....	34
Iris.....	19-21	Viola.....	34
Larkspur.....	12, 13	Windflower.....	8
Lavendula.....	23	Winter Protection.....	6
		Worm Grass.....	41



Showi

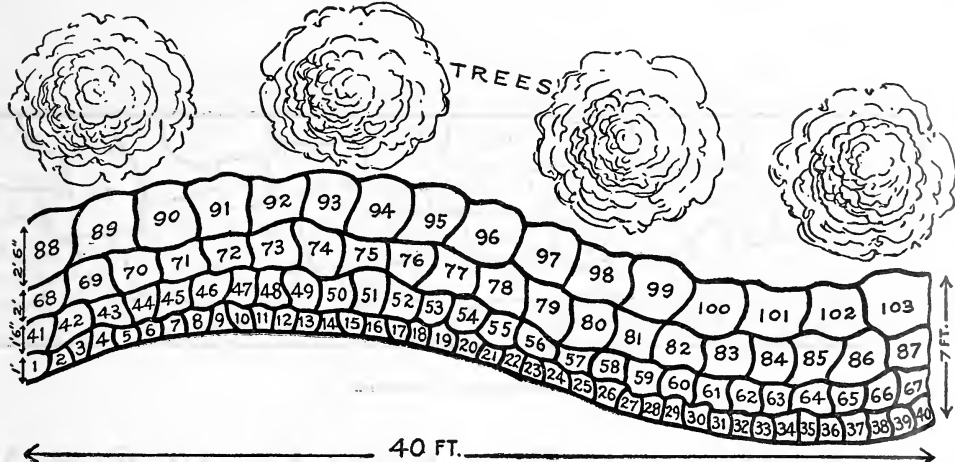
- | | |
|-----------------------------------|--------------------------------------|
| 1 Aster, Beauty of Colwall | 30 Aster, Beauty of Colwall |
| 2 Artemisia lactiflora | 31 Campanula pyramidalis, Blue |
| 3 Delphinium, King of Delphiniums | 32 Achillea eupatorium |
| 4 Pentstemon barbatus Torreyi | 33 Cimicifuga racemosa |
| 5 Aconitum Wilsonii | 34 Tritoma Pfitzeri |
| 6 Helianthus, Yellow | 35 Peony, Louis Van Houtte |
| 7 Pyrethrum uliginosum stellata | 36 Lupinus polyphyllus alba |
| 8 Eupatorium ageratooides | 37 Phlox, Goliath |
| 9 Aster, White Queen | 38 Campanula Mœrheimi |
| 10 Hollyhock, Double, Crimson | 39 Thalictrum aquilegifolium, Purple |
| 11 Rudbeckia purpurea | 40 Phlox, Elizabeth Campbell |
| 12 Delphinium, Amos Perry | 41 Papaver orientale, Goliath |
| 13 Rudbeckia, Golden Glow | 42 Salvia azurea |
| 14 Boltonia latisquama | 43 Japanese Iris, White |
| 15 Aster Novæ Angliæ rubra | 44 Hemerocallis aurantiaca major |
| 16 Artemisia lactiflora | 45 Romneya Coulteri |
| 17 Delphinium Capri | 46 Phlox Sieboldi |
| 18 Rudbeckia maxima | 47 Trollius, Orange Globe |
| 19 Spiræa Aruncus | 48 Tritoma Pfitzeri |
| 20 Tritoma Pfitzeri | 49 Campanula Mœrheimi |
| 21 Aster, Robert Parker | 50 Lupinus polyphyllus, Blue |
| 22 Hollyhock, Double, Salmon | 51 Rudbeckia purpurea |
| 23 Heliopsis Pitcheriana | 52 Phlox, Goliath |
| 24 Pyrethrum uliginosum stellata | 53 Artemisia lactiflora |
| 25 Delphinium Mœrheimi | 54 Helenium Hoopesii |
| 26 Lupinus polyphyllus, Blue | 55 Japanese Iris, Crimson |
| 27 Helianthus, Yellow | 56 Phlox, Jeanne d'Arc |
| 28 Liatris pycnostachya | 57 Lychnis Chalcedonica |
| 29 Hollyhock, Double, White | 58 Thalictrum glaucum |



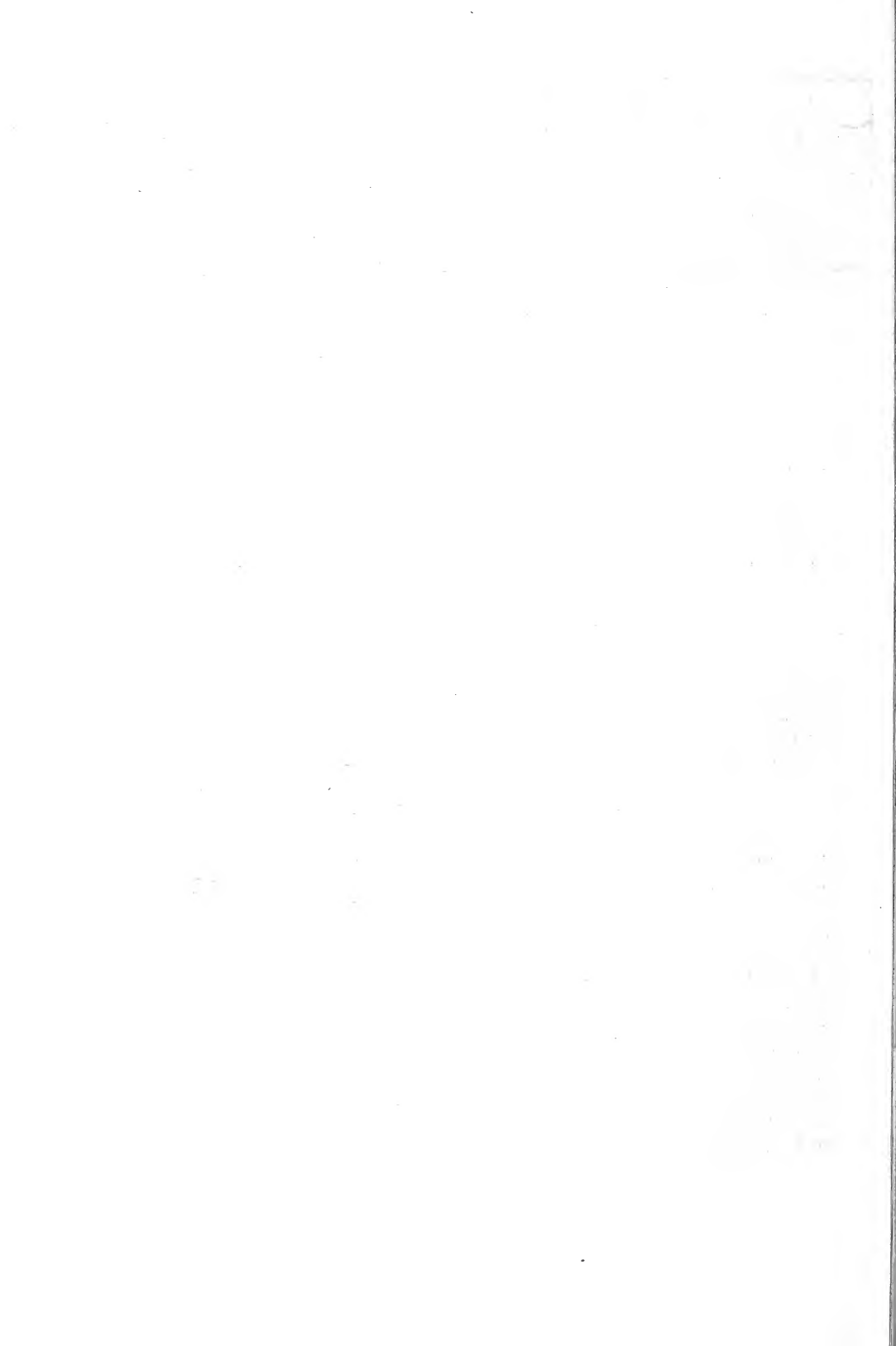
Showing a Border 150 Feet Long by 12 Feet Wide

CAN BE EXTENDED OR CUT DOWN TO SUIT REQUIREMENTS

- | | | | | | |
|-----------------------------------|--------------------------------------|-----------------------------------|---------------------------------|----------------------------------|---------------------------------|
| 1 Aster, Beauty of Colwall | 30 Aster, Beauty of Colwall | 59 Lythrum roseum superbum | 88 Peony, Louis van Houtte | 117 Montbretia, Rayon d'Or | 146 Geum coccineum |
| 2 Artemisia lactiflora | 31 Campanula pyramidalis, Blue | 60 Phlox, Von Hochberg | 89 Lychnis Chalcedonica | 118 Erigeron intermedium | 147 Funkia media picta |
| 3 Delphinium, King of Delphiniums | 32 Achillea eupatorium | 61 Lupinus Mørheimi. | 90 Coreopsis lanceolata | 119 Eryngium planum | 148 Phlox subulata rosea |
| 4 Pentstemon barbatus Torreyi | 33 Cimicifuga racemosa | 62 Aster, Beatrice | 91 Hemerocallis flava | 120 Campanula persicifolia | 149 Veronica incana |
| 5 Aconitum Wilsonii | 34 Tritoma Pfitzeri | 63 Anemone Japonica, Alice | 92 Monarda, Cambridge Scarlet | 121 Clematis recta | 150 Myosotis, Blue |
| 6 Helianthus, Yellow | 35 Peony, Louis Van Houtte | 64 Tritoma Pfitzeri | 93 Inula oculus Christi | 122 Pentstemon, Sensation | 151 Mertensia Virginica |
| 7 Pyrethrum uliginosum stellata | 36 Lupinus polyphyllus alba | 65 Phlox, Sunshine | 94 Delphinium, Capri | 123 Pyrethrum, Red | 152 Arabis alpina |
| 8 Eupatorium ageratoides | 37 Phlox, Goliath | 66 Peony, Grandiflora rosea | 95 Erigeron elatior | 124 Statice latifolia | 153 Wallflower, Red |
| 9 Aster, White Queen | 38 Campanula Mørheimi | 67 Papaver orientale, Goliath | 96 Peony, Felix Crousse | 125 Anemone Japonica, Alice | 154 Phlox subulata alba |
| 10 Hollyhock, Double, Crimson | 39 Thalictrum aquilegifolium, Purple | 68 Pentstemon barbatus Torreyi | 97 Achillea, Boule de Neige | 126 German Iris, Mrs. Neubronner | 155 Campanula Carpatica |
| 11 Rudbeckia purpurea | 40 Phlox, Elizabeth Campbell | 69 Eryngium planum | 98 Pentstemon, Sensation | 127 Adonis Amurensis | 156 Iberis sempervirens |
| 12 Delphinium, Amos Perry | 41 Papaver orientale, Goliath | 70 Agrostemma Coronaria | 99 Inula ensifolia | 128 Lobelia cardinalis | 157 Statice latifolia |
| 13 Rudbeckia, Golden Glow | 42 Salvia azurea | 71 Acanthus mollis | 100 German Iris, White | 129 Antirrhinum, Dwarf, White | 158 Geum coccineum |
| 14 Boltonia latisquama | 43 Japanese Iris, White | 72 Coreopsis lanceolata | 101 Alstroemeria Chilensis | 130 Incarvillea Delavayi | 159 Gypsophila paniculata |
| 15 Aster Novæ Angliæ rubra | 44 Hemerocallis aurantiaca major | 73 Helenium Hoopesi | 102 Centaurea montana | 131 Anchusa, Opal | 160 Nierembergia rivularis |
| 16 Artemisia lactiflora | 45 Romneya Coulteri | 74 Anemone Japonica, Prince Henry | 103 Montbretia, Rayon d'Or | 132 Anthemis Kelwayi | 161 Anemone sylvestris |
| 17 Delphinium Capri | 46 Phlox Sieboldi | 75 Incarvillea Delavayi | 104 Oenothera Fraseri | 133 Delphinium Belladonna | 162 Veronica incana |
| 18 Rudbeckia maxima | 47 Trollius, Orange Globe | 76 Centaurea orientalis | 105 Physalis Francheti | 134 Pyrethrum, Pink | 163 Heuchera sanguinea |
| 19 Spiræa Aruncus | 48 Tritoma Pfitzeri | 77 Chrysanthemum, Victor, Red | 106 Phlox, Jeanne d'Arc | 135 Phlox, Rheinstrom | 164 Campanula Carpatica, Blue |
| 20 Tritoma Pfitzeri | 49 Campanula Mørheimi | 78 Clematis Davidiana | 107 Oenothera Fraseri | 136 German Iris, Blue. | 165 Sedum spectabile, Brilliant |
| 21 Aster, Robert Parker | 50 Lupinus polyphyllus, Blue | 79 Lythrum roseum superbum | 108 Aquilegia Canadensis | 137 Arabis alpina. | 166 Arabis alpina |
| 22 Hollyhock, Double, Salmon | 51 Rudbeckia purpurea | 80 Peony, Grandiflora rosea | 109 Anchusa, Dropmore Variety | 138 Alyssum saxatile. | 167 Potentilla, Miss Willmott |
| 23 Heliopsis Pitcheriana | 52 Phlox, Goliath | 81 German Iris, Honorabilis | 110 German Iris, Queen of May | 139 Aubrietia, Peter Barr. | 168 Trollius Europæus |
| 24 Pyrethrum uliginosum stellata | 53 Artemisia lactiflora | 82 Campanula humosa | 111 Chrysanthemum, Hardy White | 140 Epimedium Musschianum. | 169 Cerastium tomentosum |
| 25 Delphinium Mørheimi | 54 Helenium Hoopesii | 83 Galega officinalis alba | 112 Campanula persicifolia alba | 141 Funkia media picta. | 170 Myosotis, Blue |
| 26 Lupinus polyphyllus, Blue | 55 Japanese Iris, Crimson | 84 Aquilegia chrysantha | 113 Aster ptarmicoides | 142 Cerastium tomentosum | 171 Alyssum saxatile compactum |
| 27 Helianthus, Yellow | 56 Phlox, Jeanne d'Arc | 85 Aster ptarmicoides major | 114 Phlox, Chastity. | 143 Nierembergia rivularis | 172 Callirhoë involucrata |
| 28 Liatris pycnostachya | 57 Lychnis Chalcedonica | 86 Centaurea dealbata | 115 Gaillardia grandiflora | 144 Wallflower, Yellow | 173 Aubrietia, Peter Barr |
| 29 Hollyhock, Double, White | 58 Thalictrum glaucum | 87 Liatris spicata | 116 Doronicum excelsum | | |



- | | |
|--|--|
| 1 <i>Dianthus latifolius atrococcineus</i> fl. pl. | 53 Fern, <i>Scolopendrium undulatum</i> |
| 2 <i>Campanula Carpatica</i> alba | 54 <i>Hepatica triloba</i> |
| 3 <i>Statice latifolia</i> | 55 <i>Chelone Lyonii</i> |
| 4 <i>Geum coccineum</i> | 56 German Iris |
| 5 <i>Papaver nudicaule</i> (Iceland Poppy) | 57 <i>Spiraea filipendula</i> fl. pl. |
| 6 <i>Viola</i> , G. Wermig | 58 <i>Oenothera fruticosa pallida</i> . |
| 7 <i>Anthemis tinctoria</i> | 59 <i>Spigelia Marilandica</i> |
| 8 <i>Gypsophila paniculata</i> | 60 <i>Tricyrtis hirta</i> |
| 9 <i>Gypsophila paniculata</i> | 61 <i>Veronica incana</i> |
| 10 <i>Pyrethrum hybridum</i> , Pink | 62 <i>Thalictrum glaucum</i> |
| 11 <i>Geum</i> , Mrs. Bradshaw | 63 <i>Hepatica triloba</i> |
| 12 <i>Helleborus niger</i> | 64 German Iris |
| 13 <i>Phlox subulata</i> alba | 65 Fern, <i>Scolopendrium vulgare</i> |
| 14 <i>Mertensia Virginica</i> | 66 <i>Chelone glabra</i> alba |
| 15 <i>Arabis alpina</i> | 67 <i>Saxifraga splendens</i> |
| 16 <i>Pachysandra terminalis</i> | 68 Fern, <i>Onoclea Struthiopteris</i> |
| 17 <i>Funkia media picta</i> | 69 <i>Lobelia cardinalis</i> |
| 18 <i>Iris pumila</i> | 70 <i>Aconitum Napellus</i> |
| 19 <i>Primula veris</i> , Mixed | 71 <i>Dielytra formosa</i> |
| 20 <i>Primula veris</i> , Mixed | 72 <i>Doronicum Caucasianum</i> |
| 21 <i>Primula veris</i> , Mixed | 73 Fern, <i>Lastrea Filix-mas</i> |
| 22 <i>Trollius Europæus</i> | 74 <i>Funkia subcordata grandiflora</i> |
| 23 <i>Gypsophila paniculata</i> | 75 <i>Campanula Grosseki</i> |
| 24 <i>Gypsophila paniculata</i> | 76 <i>Lobelia cardinalis</i> |
| 25 <i>Phlox subulata</i> rosea | 77 <i>Rodgersia podophylla</i> |
| 26 <i>Cerastium tomentosum</i> | 78 Fern, <i>Dicksonia punctilobula</i> |
| 27 <i>Funkia media picta</i> | 79 <i>Lobelia cardinalis</i> |
| 28 <i>Pyrethrum hybridum</i> , Pink | 80 <i>Funkia subcordata grandiflora</i> |
| 29 <i>Pachysandra terminalis</i> | 81 <i>Campanula latifolia</i> |
| 30 <i>Arabis alpina</i> | 82 Fern, <i>Lastrea Filix-mas</i> |
| 31 <i>Mertensia Virginica</i> | 83 <i>Anemone Japonica</i> , Kriemhilde |
| 32 <i>Trollius Europæus</i> | 84 <i>Doronicum Caucasianum</i> |
| 33 <i>Gypsophila paniculata</i> | 85 <i>Aconitum Napellus</i> |
| 34 <i>Gypsophila paniculata</i> | 86 <i>Dielytra spectabilis</i> |
| 35 <i>Phlox subulata</i> rosea | 87 Fern, <i>Onoclea Struthiopteris</i> |
| 36 <i>Cerastium tomentosum</i> | 88 <i>Helianthus rigidus</i> , Yellow |
| 37 <i>Geum coccineum</i> | 89 <i>Aconitum Wilsoni</i> , Blue |
| 38 <i>Statice latifolia</i> | 90 <i>Eupatorium ageratoides</i> , White |
| 39 <i>Campanula Carpatica</i> , Blue | 91 <i>Spiraea venusta</i> , Red |
| 40 <i>Dianthus latifolius coccineus</i> fl. pl. | 92 <i>Cimicifuga simplex</i> , White |
| 41 <i>Saxifraga cordifolia</i> | 93 <i>Hemerocallis aurantiaca</i> , Yellow |
| 42 <i>Chelone glabra</i> alba | 94 <i>Digitalis</i> , Rose-pink |
| 43 Fern, <i>Scolopendrium vulgare</i> . | 95 <i>Polygonum giganteum</i> , White |
| 44 <i>Thalictrum glaucum</i> | 96 <i>Aconitum</i> , Spark's Variety, Blue |
| 45 <i>Hepatica triloba</i> | 97 <i>Anemone Japonica</i> , Alice, Pink |
| 46 German Iris | 98 <i>Ranunculus aconitifolius</i> , White |
| 47 <i>Tricyrtis hirta</i> | 99 <i>Hemerocallis aurantiaca</i> |
| 48 <i>Oenothera fruticosa pallida</i> | 100 <i>Thalictrum aquilegifolium</i> |
| 49 <i>Saxifraga splendens</i> | 101 <i>Spiraea Aruncus</i> , White |
| 50 <i>Spiraea filipendula</i> fl. pl. | 102 <i>Eupatorium cœlestinum</i> , Blue |
| 51 <i>Veronica incana</i> | 103 <i>Helianthus rigidus</i> , Yellow. |
| 52 <i>Spigelia Marilandica</i> | |



JUL 28 1919

**MICHELL'S HARDY
PERENNIALS**